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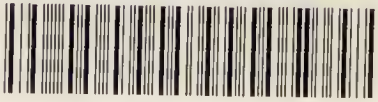

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A

# TREATISE

ON

# THE DISEASES OF CHILDREN,

WITH DIRECTIONS

FOR

# THE MANAGEMENT OF INFANTS

FROM

# THE BIRTH.

By MICHAEL UNDERWOOD, M.D.

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OF THE

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PHYSICIAN to

*Her ROYAL HIGHNESS the PRINCESS of WALES,*

AND

SENIOR PHYSICIAN

*To the Britiſh Lying-in-Hoſpital.*

IN THREE VOLUMES.

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*Ornari Res ipſa negat, contenta doceri.* MANILL.

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## ERRATA.

Page 150, Line two, for prepartion, r. preparation.
150, Line seven, for center, r. centre.
255, Line seven, for straiten, r. straighten.

# PREFACE.

THE preceding volume having embraced all the more important diſeaſes falling under the immediate province of the *Phyſician*, there remain only a few anomalous matters in his department; which having ſome relation to other complaints now to be noticed, may be ſuitably arranged in this part of the work. Theſe will be claſſed relatively to other matters; having here a principal regard to the diſorders falling under the province of the *Surgeon*, with others that may be ſaid to be of a mixed kind; but ſhould be all familiar to every Accoucheur.

But beſide thoſe affections which may be preciſely termed Diſeaſes, Infants oftentimes preſent themſelves to the world under circumſtances that call for immediate aſſiſtance, being, as it were in a kind of intermediate ſtate between life and poſitive death, and with the appearance ſometimes of being actually dead; but may, nevertheleſs, be reanimated by timely and judicious aid, ſo as to be *perfectly* reſcued from any peculiar dangers.

On this account, ſome practical directions, on this head, it is preſumed, may form a ſuitable *Introduction* to this volume; as the ſubject could not, with ſtrict propriety, be arranged under the head of Children's Diſeaſes.

INTRO-

# INTRODUCTION.

ON

APPARENTLY STILL-BORN INFANTS.

HAVING in the Preface touched upon all ſuch topics as might be deemed neceſſary to an *Introduction* to the ſubſequent parts of this work, the reader is reminded, that the preſent Exordium is dedicated to the conſideration of the ſtate of apparently ſtill-born children, and to point out the moſt likely means of their animation. And what I have here to offer is the reſult of an experi-

ence that has been attended with more ſucceſs than might have been expected.

I HAVE, indeed, both at the Lying-in-hoſpital, and elſewhere, met with many inſtances of children born with very little, and others without even the ſmalleſt appearance of life, ſome of whom have remained entirely deſtitute of any ſign of it, for more than a quarter of an hour, and yet have been happily reſtored. I pretend to little or no ſkill in this buſineſs not generally practiſed, and can ſcarcely gueſs to what to attribute this ſucceſs, unleſs it may be an unwearied aſſiduity and perſeverance in my attempts, whenſoever there are no certain ſigns of death, till I conceive nothing is poſſibly to be expected from them. And this has ſo often ſucceeded, that I have been tempted to think its importance may, poſſibly, not have been ſufficiently attended to by every

every practitioner. I reſt this preſumption, not only upon ſome fortunate events where I have had little or no previous ground for hope, but where other practitioners had, in ſome inſtances, abandoned it. A certain ſteady preſeverance in our attempts to preſerve life, as long as the leaſt hope may remain, is, indeed, not only a duty we owe to the Public, but one ſucceſsful attempt is an abundant recompence for many failures; eſpecially, as I imagine we ſhall rarely fail whenever there may be the leaſt poſitive ground for hope of a favourable iſſue.

As to the MEANS, they conſiſt only of warmth, clyſters, ſtimulants, and eſpecially blowing forcibly into the trachea.

THE ordinary ſtimulants are the ſmoke of lighted brown paper, or tobacco; juice of onions; frictions with hot cloths, and brandy; cold brandy

poured on the thorax, and on the funis umbilic. where it is inſerted into the belly; ſtriking the nates, and the ſoles of the feet; ſtimulating the noſe, and pharinx with a feather, (drawing out the mucus that may preſent;) with every other ſimilar mean calculated to excite a ſtrong effort, eſpecially that of crying; to which our attempts more particularly tend. On this account, I believe, no great benefit is to be expected from ſtroking the blood along the funis, or immerſing the placenta in warm water; the fetal life being extinct, the recovery of the child will depend on the blood paſſing freely through the lungs, which it cannot do till the child is brought to breathe freely and forcibly: the continuance of which alſo is never ſecure, till it begins to *cry*. To theſe ends, I have depended above all upon blowing into the trachea, through the

the mouth, which I am ſatisfied, may be more effectually done by the mouth of the aſſiſtant being placed immediately upon the child's, than by means of a blow-pipe; (although the air is, indeed, certainly leſs pure;) at the ſame time, preventing the return of the air before it has entered the lungs, by the fingers of one hand placed at the angles of the mouth, and thoſe of the other on each ſide the noſe. But I have ſometimes imagined, that I might attribute much of my ſucceſs not only to the *continuance* of this, but to the *manner* of doing it, by attempting to imitate natural reſpiration, by forcing out the air I have thrown in, by a ſtrong preſſure againſt the pit of the ſtomach; thus blowing in, and alternately preſſing out the air, for a long time together, omitting it only now and then, to make uſe of ſome of the abovementioned means:

which latter, however, can do very little to inſure the life of the child, until it begins not only to gaſp, and that with ſhorter intervals, but alſo to breathe in a ſomewhat uniform manner. At this time, ſhould the child not be diſpoſed to *cry*, which is frequently the caſe, I think nothing is ſo likely to ſucceed as a tobacco, or other very ſtimulating clyſter; or putting a little Scotch-ſnuff, or other pungent powder, up the noſe, which latter if they induce ſneezing, will ſoon be followed by a ſtrong cry, and the child be with certainty reſtored.

AMONGST other means, that of warmth was recommended; to which end, the infant ſhould be entirely covered with very hot cloths, which ſhould be renewed as faſt as they become cool; or the body may be immerſed in a tepid bath of ſalt and water, or milk, and be well

well rubbed all over: the cord may likewiſe be ſuffered to bleed a little, eſpecially if the face or body do not ſoon acquire the natural colour—but this ought ſeldom to be done, or the funis be divided as long as any pulſation is to be felt in it.

To theſe means may be added the cautious uſe of electricity, which appears as likely to be ſucceſsful in theſe, as in moſt other caſes to which it has been applied: but I have never been in a ſituation to make trial of it, or I certainly ſhould, as I once knew a child happily recovered by it, after being laid out for dead, for near two hours, in conſequence of a fall from a two-pair of ſtairs window.

BUT ſhould theſe ſeveral means fail; as a laſt reſource, a very different kind of ſtimulant may be tried, and inſtead of laying the infant aſide in a warm flannel,

flannel, it ſhould be expoſed to ſudden and ſevere cold, which I remember once to have ſucceeded after the life of the child had been deſpaired of.

I SHALL juſt add, that, amongſt other ſymptoms of ſome ſuppoſed irrecoverable injury a child may have ſuſtained in the birth, is that of a diſcoloured and often fetid, or bloody water forcing out of the noſe, after the lungs have been two or three times artificially inflated. Under theſe circumſtances, however, I many years ago ſucceeded in two or three inſtances ſo far as to animate children ſufficiently both to breathe and to cry; but they afterwards lay in a moaning ſtate for four or ſix hours, and then expired. To ſucceed thus far, indeed, if I am rightly informed, may prove of importance, where the courſe of a family eſtate may be pending on a living child. I have, however,

ever, lately been fortunate enough to ſucceed completely, under the moſt unfavourable circumſtances, and after a great quantity of diſcoloured mucus, and ſomething like meconium, was forced up both from the throat and noſe; and the child, an unuſually large one, is ſtill living.

IT will be preſumed, I dare ſay, that the above ſcrupulous attention is not deſigned to be inculcated in every inſtance of apparently ſtill-born infants, but principally where the death of the child may not only not be certainly aſcertained, but there has previouſly been reaſon to expect it would be brought alive into the world.—The great importance, however, of the ſubject, it is hoped, will be a ſufficient apology with moſt readers for the length of theſe directions; and as the attempt to reſtore infants to life has always been a

moſt

moſt pleaſing employment to myſelf, the deſire of being an occaſion of inducing others to a *perſeverance* in the uſe of the like means, emboldens me to riſk the cenſure of any who may deem it prolix or ſuperfluous.

A TREATISE,

A

# TREATISE,

*&c. &c. &c.*

IN the former volume, conſiderable attention has been paid to cutaneous diſorders; either from their being found to require direct medical treatment, or from their ſtanding in connexion with other complaints ſtrictly appertaining to the *Phyſician's* department.

There are, nevertheleſs, many affections of the ſkin of a different kind, which being either uſually unconnected with any diſorder of the ſyſtem, or elſe forming ſores on the ſurface requiring their appropriate topical remedies, fall ſtrictly under the province of the *Surgeon*, and will therefore be conſidered in this place.

Of

OF the cutaneous affections coinciding with one or other of the latter deſcriptions, I ſhall for order ſake, treat firſt of ſuch as appear on the Head.

## TINEA, *or* SCALD-HEAD.

THIS is a very troubleſome complaint, and is ſaid to be often a ſcrofulous ſymptom; but it is certainly more commonly communicated by contact, and when lighting on a ſcrofulous habit may be more difficult of cure. It is, indeed, highly contagious, eſpecially amongſt children, at ſchools, or other places where they mix freely together, exchange hats, or other covering of the head, with ſuch like intercourſe; by which means, it has ſometimes been communicated through a whole ſchool. I hope, however, to point out a ſucceſsful method of cure, the unpleaſantneſs of which has, improperly I think, prevented its being more generally adopted.

From

From ſome conſiderable experience, I may venture to ſay, that being uſually a mere complaint of the ſkin, it may be moſt ſucceſsfully treated by topical applications. This diſeaſe is ſeated in the little glands at the roots of the hair; is ſometimes dry, but at others moiſt, and then produces little ulcers, which being thoroughly cleanſed, and made to digeſt, may be ſafely healed up; as I have found in many other affections of the ſkin, in which the ſyſtem has, often over-ſcrupulouſly, been conceived to be concerned.

It is not uncommon, I know, to adminiſter a variety of internal remedies, and perhaps they may ſometimes be required, though I think I have ſeldom given any thing more than lime-water, or a decoction of the woods; and a few purges at the decline of the eruption.

IF the complaint be taken early, before it has ſpread far over the head, and whilſt the ſcabby patches are ſmall and diſtinct, it may be frequently cured by an ointment made of equal parts of ſulphur, flour of muſ-

muſtard, and powder of ſtaves-acre, mixed up with lard or other unctuous ſubſtance; or by the ſulphur ointment, with a ſmall addition of the calx hydrargyri alba. And this laſt preparation may very ſafely be made uſe of, if the patient be kept within doors, and the body properly open; as it will be neceſſary to rub in only a ſmall portion, once or twice a day, on the parts immediately affected. But if the diſeaſe ſhould ſpread, or has already extended itſelf over a great part of the head, the hair muſt be ſhaved off, and the head waſhed twice a day with a ſtrong decoction of tobacco; repeating this proceſs till the ſcabs diſappear, and the hair grows up from the parts they had occupied. Or, inſtead of the decoction of tobacco, the head may be well waſhed with the lotio ſaponacea, with the addition of a ſmall quantity of the aqua kali puri, and the ſcabs anointed with the unguent. hydrargyri nitrati in the place of the ſulphur ointment and calx of mercury; the former being a very powerful, as well as a ſafe

ſafe application, and may be uſed in any quantity that may be neceſſary.

BUT the complaint is ſometimes of long ſtanding before medical aſſiſtance is aſked, and is not only extended over all the head, but the ſcabs are thick, and riſe high above the ſurface, returning as often as they may fall off. I have, however, never failed to cure the common tinea by a method perhaps well known, but too ſeldom complied with in time, on account of its apparent ſeverity. It conſiſts only in well waſhing the head, firſt cloſe-ſhaved, with a piece of flannel and a ſtrong lather of ſoap-ſuds, and then rubbing in very forcibly the common unguentum picæ and a good quantity of the pulvis ellebor. alb. or other ſafe depilatory, for near an hour at a time, always uſing it very warm; and covering the head with a bladder to preſerve the ointment on the part, as well as to keep it from ſticking to the cap, or other covering made uſe of. When this has been done three or four times, not only

the ſcabs, but the hairs will alſo looſen, which muſt be pulled out, however unpleaſant the operation may be, as it will, indeed, prove a kindneſs in the end; but muſt be repeated till all the hairs be taken out: after which new hair will riſe free from ſcabs, which is a ſufficient indication that the diſorder is effectually removed. Some writers with the like view adviſe the application of repeated bliſters, after the head has been cloſe ſhaved.

The following plaſter is ſtrongly recommended by Mr. THOMAS MORISON, Surgeon in *Dublin*, as ſucceſsful in the worſt caſes.

The head is to be well waſhed and a bread and milk poultice applied, if the ſcabs are very dry; and the plaſter afterwards applied, ſpread on ſtrips of linen, which are to be renewed every day. Take of common ale, one pound; of the fineſt flour, three ounces; mix them intimately; and having ſet them over a very briſk fire, add two ounces of yellow reſin, ſtirring them

them conſtantly until they ſhall be perfectly incorporated, and take on a ſmooth gelatinous appearance.

THERE is, however, a ſpurious kind of ſcald-head, that is ſometimes more difficult of cure; but it requires nothing but patience in the uſe of one or more of the above remedies, or at moſt, an alterative plan of the flowers of ſulphur, or of ſome mild mercurial preparation, with the common decoction of the woods, or the Liſbon diet-drink. Or, ſhould the difficulty conſiſt in getting out the hair entirely, or deſtroying the diſeaſed glands at its roots, the calx viva may be had recourſe to, in one form or other; and is exceedingly preferable to an adheſive pitch-plaſter. In a few inſtances, the unguent. hydrargyri mitius has a wonderful efficacy. This remedy ſhould, however, be cautiouſly applied, and inſtead of being forcibly rubbed in, like other topical remedies, ſhould be only ſpread lightly, and very thin on the ſcalp: the body ſhould at the ſame time be carefully kept open.—In the ſpuri-

ous tinea particularly, it may be prudent to open an iſſue, or fix a ſeton in the nape of the neck.

## SCURFINESS *of the* HEAD.

SOME infants early contract a ſcurfineſs on the head, which increaſes as they grow up, becoming likewiſe very thick, and itching exceedingly. It is more commonly dry, but is ſometimes moiſt, and even diſcharges a great quantity of a very thin fluid. In either caſe, it can ſcarcely be termed a diſeaſe, and is only worthy of mention with a view to preventing miſchief, from the application of improper remedies; or its degenerating into a real complaint, through neglect. Amongſt the poor, indeed, it often ariſes from that ſource, and can be removed only by proper combing of the head, and otherwiſe keeping it clean. But ſhould it ariſe ſpontaneouſly, as it ſometimes does about the time of teething, I believe that very little

little need to be done, nor ought to be, further than keeping the head clean, and often combing, or bruſhing it cautiouſly, as above directed: at moſt, the ſcabs may be touched, every now and then, with a little cream till they begin to looſen, or with a drop or two of arquebuſade water if they are too moiſt; at the ſame time, carefully avoiding taking cold on the part.

I HAVE, however, ſometimes ſeen a ſcurfineſs of the head, taking place even during the month, attended with an exceſſive diſcharge of a thin fluid; which it would be alike improper either to repel, or encourage. A good general application in this caſe, though truly anile, is that of warmed butter and beer, with which the head may be waſhed twice a day; and certainly not only does no harm, and keeps the head clean, but has appeared to me, in ſome inſtances, to do more to remove the complaint, than any thing I have ſeen uſed.

## SCABIES, *or* ITCH.

THIS diſorder ſo commonly known and eaſy of treatment, is mentioned chiefly in order that nothing may be over-looked relative to the diſorders of child-hood. It is a very contagious diſeaſe, but uſually eaſy of cure, and ſeldom requires any thing more than a free uſe of the unguentum ſulphuris. There is, indeed, a ſpurious kind, (as of the tinea) which is far leſs, or often nowiſe contagious, but is more difficult of cure than the genuine. Should the brimſtone ointment, therefore, fail, ſulphur ſhould be adminiſtered inwardly, and ſometimes mercurials; which may likewiſe be added to the ointment, and in a few weeks, at moſt, will not fail of removing the complaint. It is common to adminiſter at the ſame time ſome alterative diet-drink.

## HERPES MILIARIS, *or* SHINGLES; (RINGWORM.)

THE Herpes miliaris, and the Shingles are diſtinguiſhed by ſome writers, but I can ſee no good reaſon for it; and M. AURELIUS SEVERINUS, and others, have eſteemed them to be the ſame diſorder.

The Herpes, like the foregoing complaints, is a diſeaſe of the ſkin, infeſting ſome children almoſt annually, and appearing in dry ſcurfy blotches, on different parts of the body, and uſually of a circular form. It becomes troubleſome chiefly from the violent itching that attends it, and would probably get well of itſelf: it even ſometimes has the appearance of being critical, or is, perhaps, rather an indication of ſome favourable change in valetudinarians, eſpecially in adults, who are ſometimes found getting the better of chronical complaints at the time the ſhingles makes its appearance. It is, how-

ever, often a blemiſh, as it frequently attacks the hands and face, and eſpecially the forehead; and in the former caſe, is ſometimes ſore. It is amongſt the vulgar errors, I believe, that when it appears on the breaſt or loins, if it ſhould extend round the whole body, it would prove fatal. This form of the diſeaſe is termed zona herpetica; but if it ſhould prove fatal, the complaint is more likely to be the proper zona, or ignis ſacer, which very much reſembles the eryſipelas veſiculoſum.

THE herpes miliaris is alſo by many diſtinguiſhed from the ring-worm, (but perhaps needleſsly;) the former being always ſuppoſed to ariſe from an affection of the ſyſtem, and to be preceded by ſhivering, or ſickneſs at the ſtomach. They are certainly both very eaſily cured, and probably would alike diſappear of themſelves. The herpes yields very readily to ſtimulating and aſtringent remedies. Spirit of wine; ſaturnine lotions, with the addition of vinegar, or white vitriol; and ointments

ments containing lead, anſwer very well; or an ointment of calcined zink and lard: but the unguent. hydrarg. nitrati is preferable to moſt others. The uſe of a fleſh-bruſh is a good prophylactic, in habits accuſtomed to the complaint.—It can be only in unhealthy children, that there can be any fear in regard to topical applications, or need of internal remedies.

Should the ſhingles ſpread and become ſore, it ſhould be treated as directed below.

## HERPES EXEDENS, *or* SERPIGO.

THIS is a malignant ſpecies of the above complaint, but is generally local. It is mentioned only as having relation to the former, being rather a ſore than an eruption, and not very common in children.

SUPPURATIVE applications may be made uſe of in the early ſtage of the complaint, ſuch as ointments of minium, ſoap, and Venice turpentine, or a ſuppurative poultice, in order to liberate the diſeaſed glands

glands on the ſurface, and abſorb the acrid diſcharge. A very good poultice of this kind may be made of figs, onions, and white lily roots, boiled in water to a ſoft pulp, with, or without the addition of a little bread and milk. After this, the parts ſhould be waſhed with ſaponaceous lotions, and laſtly, with ſtrong ſolutions of vitriol. Should theſe fail, the ung. hydrarg. nitrati will be proper; and as the laſt remedy, cauſtic applications; of which, butter of antimony is the beſt, with which the little ulcers may be touched lightly from time to time. The patient may take at the ſame time of a decoction of burdock-roots, or ſarſaparilla.

## VERRUCÆ—CLAVI PEDUM.

THOSE Warts which appear upon the fingers, hands, and necks of children, may be conſidered as a ſmall inconvenience, or a trifling deformity, rather than as a diſeaſe. They are ſeldom painful, except they

they have been improperly irritated; and have no tendency to proceed to any unfavourable event.

SURGICAL writers have generally agreed in conſidering them as the effect of a certain morbid ſtate of that part of the ſkin in which they are ſituated; but what that peculiar condition of the ſkin is, by which they are produced, has not been exactly aſcertained: the various accounts of it are all very problematical; and of theſe, perhaps, Mr. FREKE's is as ingenious as any.

THE hard, and almoſt inſenſible wart, with a broad baſe, and having a cutical covering is the moſt common ſpecies. This little excreſcence ſeldom riſes high above the level of the ſkin, on the back of the hand; and is often remarkably flat and low when it germinates on the inner part of the hands or fingers; and being a ſpurious production, ſeldom poſſeſſes a vital energy ſufficient to prolong its duration beyond a few years. Hence we commonly obſerve, that thoſe warts which appeared in infancy diſappear imperceptibly

tibly after the age of puberty, without the aid of external applications. This is ſometimes the caſe likewiſe, when warts have firſt appeared in adult age, more eſpecially where they have been ſmall and ſeſſile.

THE various methods that have been recommended of deſtroying warts, may be reduced to the two following claſſes. Such as intercept the circulation of the blood through the ſubſtance of the wart; or ſecondly, thoſe which produce a deſtructive inflammation in them.

1ſt. Ligatures made of horſe-hair, or ſilk-threads. Whenever theſe can be conveniently applied, they are the leaſt dangerous, and the moſt effectual. For it is a certain fact, that warts removed by ligature return leſs frequently, than when deſtroyed by any other means.

2dly. Cauſtic applications, or the actual cautery: or ſpirit of ſal ammoniac with quick-lime: vitriolated copper: nitrated ſilver: butter of antimony: burning ſulphur.

When the ſurface of the wart is deſtroyed

ſtroyed by any of theſe applications, the hard cruſt muſt be ſcraped off the next day, and the medicament be re-applied; and this proceſs muſt be repeated daily until the excreſcence be deſtroyed down to its root.

When a wart is ſituated on a joint, or on one of the lips, or on the eye-lid, it will not be prudent to uſe cauſtic applications.

I have not mentioned the exciſion of the wart becauſe the excreſcence is ſo very liable to ſprout again when it has been cut through, that this method is adviſeable only when it is propoſed to employ cauſtic applications to the wounded part.

## CLAVI PEDUM.

YOUNG People are leſs ſubject to this excreſcence than adults; but being, nevertheleſs, not exempt from it, a curſory notice of it, at leaſt, may not be improper.*

* The reader may ſee a fuller account of the nature of Corns, and their treatment, by Mr CARLISLE, Medical Tracts and Obſervations, vol. vij.

CORNS

CORNS appear always about the feet; uſually the upper part of the toes, and on the joints; on the under part of the foot where the preſſure is the greateſt; or under the nails; and are painful, eſpecially if preſſed much by tight ſhoes, or other covering of the feet. They differ alſo in other reſpects from the wart; the corn having the appearance of an inverted wart, the ſurface of the former being not unlike the inferior part of the latter.

THE Corn ſeems to be little more than hardened ſkin, and to be owing merely to compreſſion: it is therefore rather a morbid change of that part than an organized excreſcence, and on that account, does not endure the rough treatment of the wart. It may, however, be ſafely pared down from time to time, but not to that degree as to be made to bleed, or rendered ſore, eſpecially in people advanced in years. The common wafer made uſe of for ſealing letters, moiſtened and applied to the corn, is both a harmleſs covering and defence, and has ſometimes appeared to looſen this

this excreſcence, and occaſion it to be thrown off.

## STEATOMATOUS TUMOURS, *or the* SUET-LIKE WART.

BESIDES the above mentioned excreſcences, there is one of a very different kind; which though when appearing about the neck and face, it paſſes with many people for the common wart, is really a ſuppuration of the little ſebaceous glands, and appears chiefly about the face, neck and head, where this kind often grows in great numbers; and is the only kind of ſteatoma here treated of. They more commonly infeſt young children, and particularly infants when cutting their teeth; and will fall off, and appear again frequently, during that period. They diſcharge a ſuet or cheeſe-like matter, as other inflammatory tumours of this claſs; after which, they heal up, and return again, like the ſtythe, or ſtye on the eye-lids.

Being

Being of this harmleſs nature, it is unneceſſary to do more than notice them, unleſs it be juſt to add, that as a preventive, the adjacent parts may be well rubbed two or three times a day; but when the tumours are grown to a certain ſize, they ſhould be incloſed in a ligature before they break, or ſhould be touched with the argentum nitratum immediately afterwards.

## OPHTHALMIA.

THE eyes of new-born infants are very apt to be inflamed during the firſt three or four days after birth, eſpecially in the winter ſeaſon. If it be owing to taking cold, it is probable it has been either immediately after the child was born, before it has been given away to the nurſe, or very ſoon afterwards; and on this account, a flannel cap becomes a very neceſſary part of its covering previouſly to its being formally dreſſed.

This

This kind of inflammation, however, is ſeldom of much conſequence; and generally diſappearing of itſelf, upon merely keeping the head warm, or by waſhing the eyes with a little roſe-water. Should the inflammation continue many days, or perhaps ſeem to increaſe, three or four drops of the aq. lithargyri acetati and a grain or two of white vitriol may be added to two ounces of the roſe-water; and the infant take a little manna, or rhubarb and magneſia, if the bowels ſhould not be ſufficiently open. But there is an inflammation to which infants are liable, that ſometimes continues a long while, and therefore calls for further attention. I do not allude to that redneſs on the eye, known by the name of ſugillatio, which will often remain a long time, return, and diſappear again, without the leaſt injury to the child; nor to the watery eye, which will ſometimes continue for many months, and even for years; of which notice will be taken afterwards. But the affection intended here is accompanied with the true

appearances of ophthalmia, attended with a diſcharge as in the ophthalmia of adults: it will ſometimes get a little better by common means, but ſeldom remains ſo for many days together, and generally increaſes at the end of the month.—It often ſeems connected with the ſtate of the bowels, and the coming on of a purging will then frequently cure it.

I HAVE nothing out of the common way to recommend for it;* nor does it require much to be done, unleſs it prove tedious, as it has been ſaid it ſometimes does, in which caſe the parts behind the ears ſhould be made ſore, and be kept ſo for ſome time. Previous to this, it is often neceſſary to apply a bliſter to the back, and a leech to one or both temples; to keep the body open, and make uſe of the cooling collyrium before recommended. If the child be inclined to a frequent return of it for years, as I have known even very healthy children, it will ſome-

* For a more full account of the treatment of *ophthalmias*, ſee *Surgical Tracts*, 3d *Edition*.

times

times degenerate into what is termed the watery eye; an excellent remedy for which is a grain of white vitriol, mixed with ſuch a ſmall portion of any unctuous ſubſtance as will form it into a liniment, which ſhould be put into the inner angle of the eye every night, at going to bed. In ſome of theſe caſes, however, the ointment of nitrated quickſilver has proved a more ſpeedy remedy, and is a leſs painful application.

There is, however, a caſe of watery-eye attending older children, in which the diſcharge is very hot and acrid, and the eye at the ſame time inflamed. Theſe affections diſappear, and recur again ſuddenly, without children having ſenſibly taken cold, or any other manifeſt cauſe; and will continue ſo doing for a great length of time. It is not a common complaint, and as far as I have noticed it, has attended only ſuch children as have other marks of humour, ſo called, or ſome diſorder of the ſkin.

The complaint has proved very obſtinate, both in regard to the inflammation,

and watery diſcharge, though all the common means of cure have been ſucceſſively attempted, until the head has been ſhaved, and an oiled-ſilk cap applied over the whole ſcalp. This never fails to procure a great diſcharge from the head, and I have known it remove the complaint in two or three days, after a long uſe of other remedies.

BUT there is a far more formidable inflammation, which has of late years been called the purulent ophthalmy, diſtinguiſhed from every other by the vaſt quantity of thick matter diſcharged, and great ſwelling of the lids.

THIS is ſo dangerous an inflammation as to require the beſt advice on its very firſt appearance. It now and then appears at the birth, but more commonly ſeizes an infant a few days afterwards, without any previous complaint; and when neglected, has ſometimes not only deſtroyed the ſight, but diſſolved the eye itſelf, in leſs than a week's time. I have likewiſe ſeen it exceedingly

ceedingly violent in children of four or five years old, but rarely without ſome blow, or other accident.

In this diſeaſe, every thing that may remove inflammation, and unload the veſſels of the part, ſhould be immediately had recourſe to. The body ſhould, therefore, always be kept open, and leeches be applied to the temples, eſpecially in children of four or five years of age. In bad caſes at this period, ſcarifications alſo of the tunica conjunctiva, (which generally falls out upon their being opened;) bliſters to the back, nape of the neck, and behind the ears, are often eſſentially neceſſary. It ſhould ever be remembered, that in advanced childhood, the taking away of blood at the beginning is often not to be diſpenſed with, nor to be ſparingly done. The application of one leech to the temple, or neck will have no good effect, though often repeated: two, three, or more, according to the ſtrength of the child ſhould be put on at a time; and a bliſter to the back ſoon afterwards; which

will often do more to conquer the inflammation, than moſt other means put together, if had recourſe to in time.

EVEN in new-born infants, it is expedient, in many caſes, both to take away blood, and to keep up a conſtant diſcharge from behind the ears, which may be done by applying, every three or four days, a narrow ſlip of bliſtering plaſter to theſe parts, and afterwards dreſſing them with the ceratum ſpermaceti, or other mild ointment. The edges of the eye-lids ſhould be kept conſtantly greazed throughout the day, eſpecially in new-born infants, that the thick matter may find an eaſy eſcape. At night the ceratum lithargyri acetati may be ſpread on ſoft linen, and applied to the eye, and over it a very ſoft cold poultice made with the aqua lithargyri acetata, laid on as lightly as poſſible; that by its conſtant moiſture, the eye-lids may always be kept ſupple. But if the diſcharge ſhould ſeem to be confined, or the eye affected, by the weight of the poultice, this application ſhould be changed

ed for ſoft linen rags, which ſhould be frequently wetted with cold brandy and water, or ſome yet more aſtringent lotion.

THROUGHOUT the complaint, aſtringent and ſtimulating applications are to be made uſe of, unleſs the complaint be very ſlight, or ſenſibly gives way very ſoon; being not only far preferable to other means, but ſo neceſſary, that ſhould emollient poultices, and merely cooling collyria be depended upon, the event were likely to be fatal. What may be the very beſt remedy, in the worſt caſes, it may not be very eaſy to determine, having for many years ſucceeded, and in a reaſonable time, by different means. But ever ſince I have ſeen Mr. WARE's firſt publication on diſeaſes of the eyes, I have had ſuch frequent, and ſucceſsful recourſe to the aqua camphorata, as recommended by him, that I am inclined to give it a general preference to other remedies. One dram of the aqua camphorata of *Bate's* diſpenſatory, to two ounces of water, will be a ſufficient ſtrength to begin with. A few drops ſhould be inſtilled

ſtilled into the eyes, ſeveral times in the day, as well as the lids be frequently waſhed with it. It will ſometimes be neceſſary to inject it into the eyes with a ſyringe, the lids being ſo much ſwelled, as not to admit of its entrance by other means.

THE topical remedies alluded to, in the place of the aqua camphorata, are tinct. opii, and the unguentum hydrargyri nitrati, which ſhould be applied every night at going to reſt; the former being dropped into the eye after the lids have been touched with the ointment.* It is ſometimes proper to lower and ſoften the ointment with a little freſh butter, or ol. amygdal. and to add a little camphor.—In a late inſtance, the complaint has been ſpeedily removed by the electric aura.

* This tincture and ointment are uſually a very ſpeedy remedy for the ſore-eye induced by the ſmall-pox, and meaſles; as well as for the ophthalmy in ſcrofulous habits; a complaint under almoſt every other mode of treatment very tedious of cure.

It

It has been ſaid, that where this inflammation has not been properly treated from the beginning, the eye is ſometimes exceedingly injured by it, ſo that even the coats of the eye will burſt. At other times, the cornea becomes much thickened, and the pupil more or leſs opake by means of one or more ſpecks which the inflammation has occaſioned. It ſhould be remarked however, that we ſometimes meet with an agreeable ſurprize at the decline of this formidable complaint, and find the eye much leſs injured than had been ſuſpected at the time we were firſt able to get a ſight of it. And at others, even where the cornea has burſt, the aqueous humour has been reſtored, and being confined by the cicatrice, the patient has recovered his ſight. On the other hand, the cornea has ſometimes been ſo greatly injured, or the iris contracted, that though the eye has not been ſunk, the ſight could not be reſtored by any means. In other inſtances, a long and cautious uſe of eſcarotics, and paring off the

the thickened parts of the cornea, have afforded a certain degree of viſion.

## PSOROPHTHALMIA.

THIS complaint is ſo much of the nature of the former, but with more ſenſible affection of the lids, and leſs of the eye itſelf, that I need only to recommend for it the uſe of the like applications. In particular, ſlight ſcarifications of the lids, in ſome inſtances, and the application of the ung. hydrarg. nitrati, and immediately afterwards inſtilling a few drops of laudanum into the eye, will uſually very ſoon have a good effect; but the cure is often a work of time.

IN ſome permanent inflammation, I have been inclined to the opinion of the late Dr. HUNTER and others, who after having tried a variety of means, and aſſiſted in conſultation with different phyſicians, have been induced to think, that many of the very

very ſtubborn ophthalmias originate from a venereal taint, and can only be ſucceſsfully treated by its ſpecific remedy, in one form or other.——Every practitioner will be very careful how he takes up ſuch an opinion in particular inſtances;* however, it is right to obſerve, that if none of the means above recommended ſhould produce a favourable change in eight or ten weeks, I believe nothing but that ſpecific ſpecies of alteratives will have any laſting effect.

THOUGH it is not my deſign to treat on this diſeaſe, it may not be amiſs to obſerve, that whenever a venereal taint actually exiſts, it is more ſafely treated by unction than in any other way; and in-

* The *French* phyſicians ſeem too much inclined to regard the purulent ophthalmy in this view, being a very common ſymptom, amongſt others truly venereal, in many infants in the *Hotel-Dieu, l' Hoſpice de Salpétriere, Vaugirard*, and *des Enfans trouvès*; but when this ſpecies of ophthalmy appears alone, the caſe ſhould not be haſtily concluded to be venereal, however violent the ophthalmy may be.

fants would probably be cured much oftener than they are, if recourſe were had to it in better time than it commonly is. If internal remedies, however, are for any reaſon preferred, I have found none ſo efficacious, convenient, and ſafe, as the late Mr. WARD's white drop.—In a writer before quoted, I find a ſtrong recommendation of the ſoft pulp of ſarſaparilla reduced to a fine powder, and adminiſtered in the infant's pap. But having had no experience of it myſelf, I can only ſay, that where it may be found to agree with the ſtomach, it may have its advantages for new-born infants, or perhaps, prove an auxiliary to mercury in thoſe of a more advanced age.

IN an Appendix given by Mr. WARE to his laſt account of ophthalmy, he mentions a ſpecies he has lately met with in young children, originating from a foul ſtate of the primæ viæ. In this kind, no topical means will effect a cure without adminiſtering at the ſame time active purges. He adviſes calomel particularly, of which a few grains ſhould be taken at bed

bed time, and a doſe of jalap the next morning. This courſe ſhould be repeated three or four times in quick ſucceſſion. Tonic remedies, ſuch as the bark and ſteel are ſaid to be ſometimes uſeful afterwards.

A like inflammation he attributes to difficult dentition; which neceſſarily calls for a thorough, and ſometimes repeated lancing of the gums.

## LEUCOMA, *or* SPECK *of the* EYE.

THIS is often a conſequence of long continued ophthalmias, and is mentioned by Dr. ARMSTRONG amongſt the diſeaſes of children, in his ſecond edition. He directs a variety of things for the cure of it, which he ſays are often efficacious if the ſpecks have been recently formed, but when of long ſtanding, he has never ſeen any method ſucceſsful. I ſhall only obſerve, that in a very great number of caſes, a drop or two of the aq. cupri ammon. inſtilled into the eye, two or three times a day,

day, has removed ſuch ſpecks, in the courſe of a few months, and ſometimes much ſooner, without any other means. Should this fail however, trial may be made of a ſolution of the hydrargyr. muriatus, one grain being put into four ounces of water, and the ointment of nitrated quickſilver be applied in the manner before recommended; and like the other remedies be continued as the diſpoſition to inflammation may admit.

## CATARACT, *and* GUTTA SERENA.

ALTHOUGH theſe diſorders are not very common in young children, they do, nevertheleſs, ſometimes occur; and infants have even been born with a cataract in one or both eyes, or totally deprived of ſight by the gutta ſerena. I ſhall therefore ſpeak of theſe two diſeaſes together, and the rather becauſe ſome of the remedies are here accommodated to both.

IN

IN the former of theſe, it is well known, that the pupil appears white or pearl-coloured, inſtead of black; and in the latter has but little of an unnatural appearance, except that it is larger, and neither dilates nor contracts when expoſed to different degrees of light.

It would, indeed, ill become a man of the leaſt character and experience to affect to have much to offer in a way of remedy for theſe dreadful complaints; the oldeſt and beſt practitioners never having pretended to be very often, or by any means uniformly ſucceſsful in the treatment of them. From what I have known, however, they are not to be deſpaired of, and I ſhould think it unpardonable not to hold out every occaſion of good, or of comfort in my power, however little it may be, in caſes wherein art has ſo generally failed—*Valeat quantum valere poteſt.*

WHERE a diſpoſition to cataract and gutta ſerena have been ſuſpected, I have known very conſiderable benefit obtained, and even the ſight fully reſtored by

by an alterative plan of calomel and cicuta; or by the long continued uſe of an aromatic vapor with ſpirit. ammon. compos.* conveyed to the eyes by means of a tube properly adapted, and bruſhing the eyes and the adjacent parts, ſeveral times a day, with ſoft and ſmooth bruſhes, which are properly conſtructed by *Meſſrs. Ayliffe* and *Gee*, in *Wardour-ſtreet*.

Somewhat agreeable to this idea is the plan ſince recommended by Mr. WARE in his late treatiſe on certain diſorders of the eye; and like many other important diſcoveries, was the effect of accident. Upon this he happily improved, having ſucceeded in ſeveral inſtances of incipient cataract when the conſequence of external injuries, by exciting a tranſient inflammation. The application he has employed to this end has been ether, either alone, or diluted with a third or fourth part of a weak ſolution of hydrarg. muriatus, and

* Half an ounce of the ſpirit with two ounces of water, ſhould be kept boiling over a lamp, and be made uſe of two or three times a day.

ſome-

ſometimes mixed with oleum ſuccini; which has in ſome caſes been ſoon attended with a ſenſibly good effect, though in others not till it has been repeated for ſeveral weeks. The ſucceſs attending theſe caſes, Mr. WARE adds, encourages him to hope for the like where the opaque cryſtalline is either ſoft, or fluid; in which ſtate it uſually is when the diſorder is diſcovered in infants, either at the time of their birth, or ſhortly afterwards.

In the gutta ſerena, electricity has ſucceeded in ſeveral caſes; and in one inſtance, a lady whilſt under ſuch a courſe, ſuddenly recovered the perfect uſe of her eyes, through a blow ſhe accidentally received on the face, which produced a copious hemorrhage from the noſe. In imitation of this, the like diſcharge has been artificially procured by wounding the internal veſſels of the noſtrils; but without apparent good effect. Mr. WARE in the above mentioned treatiſe confirms this favourable opinion of electricity, and adduces four inſtances of gutta ſerena cured

by it, and as many by a medicated ſnuff compoſed of ten grains of hydrarg. vitriolat. with about a drachm of the pulvis aſari comp. or in place of that, the glycirrhiza, or ſaccharum commune. The external uſe of the capſicum has likewiſe lately been attended with ſucceſs. To this end, one grain of *Cayenne* pepper is to be infuſed in cold water, of which a few drops are to be inſtilled into the eyes, three times a day.

A curious remedy has been lately had recourſe to with ſome ſucceſs, by *Profeſſor* ARNEMANN, of *Gottengen;* and any new remedy for ſuch a diſorder is an acquiſition. This conſiſts only in exciting vertigo by placing the patient in a whirling chair, with his head at various diſtances from the centre. Not that the vertigo, it is obſerved, is a co-operating cauſe, (though it is a favourable ſign;) but the ſtrengthening and reſtoring tone to the eye, by exerciſing it with vertiginous, or rotatory commotions of the head. Another remedy adviſed by this author, is the exhibition

hibition of camphor, with, and without, *belladona*; the former in doſes from two to ſix grains, generally, twice a day, and the latter in doſes of one or two grains, every day. Theſe medicines, however, it is remarked, can be productive of good only in caſes of real debility, ariſing from want of excitation, or in aſthenic; while on the contrary, in plethoric weakneſs, they muſt neceſſarily be detrimental to the patient, and aggravate, rather than diminiſh, the ſymptoms of the diſeaſe.

It ſhould be obſerved, however, that where the *belladona* can be diſpenſed with, it certainly ought, as it is a medicine not to be triffled with. The exhibition of calomel together with the camphor, has alſo been uſed with much ſucceſs lately in *London*, eſpecially while under a courſe of electricity.

To theſe brief obſervations I have only to add, that a gentleman of near ſixty years of age, for whom I had been conſulted about three years before; ſome time after having been let blood in the above

mentioned way, and made trial of electricity without any apparent advantage; recovered from a gutta ſerena of near two years ſtanding, under the uſe only of a common collyrium: which as I cannot conceive to have had any ſhare in the cure, conſpires with a few ſimilar inſtances to hold out ground of encouragement to other ſufferers, ſufficient to prevent deſpair, under this melancholy diſeaſe.

I have little more to ſay in relation to the cure of the cataract by a ſurgical operation, either by extraction or depreſſion, than that neither of them is adviſeable for infants unfortunately born with the diſeaſe, till they have attained to five or ſix years of age:—How far readers may at any time be diſpoſed to make trial of the means for the diſſipation of the cataract hinted by Mr. WARE, will, probably, depend upon ſome further information with which that attentive practitioner may favour the public. In the mean time ſurgical readers will do well to conſult the above mentioned treatiſe for ſome very excellent

cellent practical obſervations on the mode of extracting the opaque cryſtalline; as well as the obſervations of Dr. REIMARUS,* adopted by Dr. GRASMAYER, at *Hamburg*, on the uſe of the extract of the *Belladona* diſſolved in water, previous to the operation. A few drops inſtilled into the eye, ſoon rendering it paralytic for a ſhort time, with great dilatation of the pupil; whereby the eye is ſaid to be rendered very manageable under the hand of the operator.

## HORDEOLUM STEATOMATUM, *Or the* STITHE, *or* STYE.

THE ſpecies of ſtithe here intended, is ſufficiently diſtinguiſhed by the noſological term. It is a ſmall inflamed tumour on the edge of the eye-lids, more commonly on the ſide towards the noſe; but there are ſometimes two or more at a time. It riſes ſuddenly, as if from a cold, or blaſt,

* *Magazine Encyclopedique*, 1797.

and in the end ſuppurates, forming matter of a thick, or cheeſy conſiſtence; often, indeed, not for ſeveral weeks, or even months, but ſometimes much ſooner. It is occaſioned by an obſtruction in the glands of the eye-lids; and the matter being incloſed in a hard cyſt, the inflammation often returns in the ſame ſpot, till the cyſt being deſtroyed by repeated ſuppurations, the cavity is afterwards filled up, and the complaint diſappears.

ALL that is neceſſary to prevent the returns of this temporary blemiſh, which greatly weaken the eye, is to imitate this proceſs of nature. To this end, the little abſceſs ſhould be touched, as ſoon as it breaks, with the argentum nitratum, cut to a point, (carefully avoiding doing injury to the eye); which by deſtroying the cyſt, at once removes the complaint.

When theſe ſtithes are ſmall, or hang by a very narrow baſe, they may be ſafely cut off, or tied very tight with a bit of ſilk, and when ſeparated, touched with the cauſtic as before mentioned.

DEAF-

## DEAFNESS.

CHILDREN are frequently rendered deaf, in different degrees, in one or both ears, by very ſlight colds, and at the expiration of a few days the hearing returns, without recourſe to any means. It is, however, ſometimes otherwiſe, and it becomes neceſſary to give a little purging phyſic; to keep the ears warm; and to confine the child to the houſe: and where this does not ſucceed, the complaint is not a little difficult to cure. Should it ariſe from indurated wax, it will be proper to ſyringe the ears with warm water, to which ſhould be added a tea-ſpoonful of lavender, or honey-water; and a few drops of warmed oil of almonds may be inſtilled into the ears at going to bed. If theſe little means fail, warmer remedies ſhould be made uſe of, ſuch as the following, which I have found very frequently ſucceſsful.

℞. Olei amygd. ʒß Ol. Succini rectific. gtt. xx. Spir. Camphorat. ʒß. Tinct. Caſtor. ʒj. Miſce, et inſtill. guttas iv vel vj calefact. aur. affect. nocte et manè.

Deafneſs, however, is ſometimes owing to the want of a due ſecretion of wax, and is then much more difficult of cure. To promote this ſecretion, a few drops of the ſoap-liniment, oil of almonds and ether, and ſuch like warm acouſtics ſhould be tried, and continued for ſome time, if they ſhould not occaſion much pain; and in all caſes, bliſters may be applied behind the ears. The juice of onions, or a clove of garlic, raw, or roaſted, put into the ears, has ſometimes reſtored the ſecretion, and removed the deafneſs; and in many caſes it has been effected by electricity. I have, however, lately fallen upon a method that has been univerſally ſucceſsful by very ſimple means, conſiſting only in adapting an entire covering to the ear, made of any adheſive plaſter ſpread upon thin leather, ſo as completely to exclude the external air. The plaſter ſhould be renewed as often as it gets anywiſe looſe, repeating it till the ſecretion of wax is in ſufficient quantity; which ſeldom requires more than five or ſix weeks.

But

But I am ſorry to add, that although auriſts have found it ſo difficult to reſtore this ſecretion, and have therefore conceived, deafneſs to be often owing to the want of it, I have frequently found it nowiſe relieved by a return of the ſecretion. Poſſibly, this may be owing to the cauſe of deafneſs lying in the auditory nerve, which is frequently the caſe; and here alſo, electricity is particularly adapted, either through the meatus auditorius externus, or the Euſtachian tube. Medicated ſnuffs alſo that invoke gentle ſneezing, and diſcharges from the head, have ſometimes been found ſurprizingly efficacious; as hath likewiſe ſea-bathing. Should theſe different methods fail, very little is to be expected from art. Nature, however, ſometimes effects the cure; and children after having been deaf for ſeveral years, ſuddenly recover their hearing, eſpecially females: one fortunate inſtance of which happened lately.

EAR-

## EAR-ACH.

IT is needleſs to ſay much on this article. The pain is uſually ſpaſmodic, or if not, it is owing to taking cold in ſome part about the head, eſpecially the teeth. In this caſe, a diaphoretic at going to bed, and a doſe of cooling phyſic the next morning; with a clove of garlic put into the ear, or a poultice of oinions applied over it, will remove the pain. If theſe fail, a bliſter may be applied behind the ear.

If it ariſe from ſpaſm, the pain is often exceedingly ſevere, and is apt to return frequently; being readily excited by every little cold, eſpecially in ſome habits, tormenting young people at times for ſeveral years. The juice of rue is here a good remedy, or if this fail, a little laudanum added to the acouſtic directed for deafneſs, and dropped warm into the ear.

## TOOTH-ACH.

I JUST glance at this painful complaint as at the former, which alſo frequently accompanies it at every age; while ſome young children ſuffer by it greatly during, or after ſhedding their firſt teeth.

If it be proper to have them drawn, that is the well-known, and moſt certain remedy; but when that operation may be, on any account, objected to, palliatives will ſometimes ſucceed; ſuch as a bliſter behind the ear; a clove of garlic, or a few drops of laudanum, made warm, and inſtilled into it, or a pepper-corn bruiſed, put into a little linen bag, and wetted in hot brandy; pounded ginger and white of egg, laid to the cheek; a few drops of ol. Caryophil. aromat. applied on lint to the hollow tooth, and eſpecially the paſte, or plug, contrived by Mr. COCKRAN, which the great good effects I have been witneſs to, will, I hope, be a ſufficient apology for mentioning.

CANCRUM

## CANCRUM ORIS.

THIS is chiefly a complaint of children, is often talked of by nurſes, and is uſually as trifling as any. It has, indeed, been ſaid by ſome writers to prevail very much in *England* and *Ireland*, and to be often a ſerious complaint. Such a diſorder, if it really be canker, may be treated as under the next article; but the common canker is rarely troubleſome to cure.

IT ſometimes makes its appearance in the month, at others, about the time of teething; and frequently at the age of ſix or ſeven years, when children are ſhedding their firſt teeth, and the ſecond are making their way through the gums; which are covered with little foul ſores, extending ſometimes to the inſide of the lips and cheeks. It ſeldom requires more attention than was mentioned under the article of dentition; any mild aſtringent application, and keeping the body open, uſu-

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ally effecting a cure; or if it does not, and the complaint makes its appearance at the time of teething, it will generally go away as ſoon as the teeth are come through.

The worſt ſpecies of this complaint that I have happened to ſee, has been during the ſecond period of dentition, when a child has been ſhedding a number of teeth together, leaving the rotten ſtumps behind, which have been neglected to be drawn out. The whole gums will then ſometimes be ſpongy, or diſſolve into foul, ſpreading ulcers, and ſmall apertures will be formed, communicating from one part to another, accompanied with an oozing of a fetid, and ſometimes purulent diſcharge.

IF the ſtumps of the decayed teeth can, in this caſe, be eaſily got at, they ought to be extracted; after which, ſome ſuch application as the following will ſoon brace the looſe gums, and heal up the ulcers.

℞. Bol.

℞. Bol. Armen.
Gum. Myrrhæ
Cort. Peruv. pulv.
Cremor. Tartari āā ʒi.
Mel. Roſæ q. ſ. miſce, ft. Paſta.
℞. Aq. Calcis ʒvij.
Tinct. Myrrhæ,
Mel. Roſæ āā ʒ ß. ft. Miſtura.

The gums ſhould be touched ſeveral times in the day, eſpecially after meals, and at going to bed, with the above paſte, and the mouth waſhed occaſionally with the mixture.

If no conſiderable change for the better ſhould take place, in a week or ten days, a drachm of alum may be ſubſtituted in the place of one of the drying powders, and inſtead of the above mixture, one acidulated with as much of the muriatic acid as the parts will endure, occaſionally made ſtronger, till ſome amendment be perceived; the belly being, in the mean time, kept properly open. If internal remedies be thought neceſſary, Peruvian bark, ſarſaparilla, and mineral acids will be the pro-

propereſt; and the child may be kept on a diet of milk and vegetables.

## GANGRENOUS EROSION *of the* CHEEKS.

THIS complaint has ſome reſemblance to the canker, though it is much more dangerous, and is not a mere local diſeaſe. I have ſeen no clear account of it in any late writer but Mr. DEASE of *Dublin*, who ſeems to have met with the diſorder pretty frequently, and deſcribes it very accurately in his tract on the diſeaſes of *Lying-in Women*, &c. to which I am very much indebted on this occaſion. Mr. HURLOCK, indeed, in his treatiſe on dentition, printed in 1747, mentions a complaint that ſeems to be of this kind, though he does not appear to be well acquainted with it.

It uſually attacks children from two, to ſix or eight years of age, eſpecially the unhealthy, and ſuch as have been ſubject to worms. The whole body often feels cold

cold on the approach of the diſeaſe; after which a black ſpot appears on one of the cheeks or lips and ſpreads faſt; but without any marks of inflammation. Oftentimes the whole ſide of the face is eaten away, together with the lip, ſo that the bare jaw-bone and inſide of the mouth appear. In the end, the entire lower-jaw falls down on the breaſt, and the whole ſide of the face is diſſolved into a putrid maſs; a colliquative diarrhœa taking place from the offenſive matter that is continually ſwallowed, eſpecially by very young children.

IN the CURE, internal as well as external remedies are required; and only ſuch as correct putreſcency, and ſupport the ſtrength, ſeem to be of any uſe. A few drops of the acidum muriatic. therefore, taken inwardly, in the infuſ. roſæ, or in the child's drink; the ſaline draught in efferveſſence; and in the end, the bark, in doſes ſuited to the age, with good broths, jellies and wine, are the proper remedies. The parts ſhould be waſhed,

and

and likewiſe injected with muriatic acid in chamomile, or ſage tea, and afterwards dreſſed with the acid mixed with honey of roſes, and over all a carrot poultice. The child ſhould in the mean time be gently purged with magneſia or rhubarb, to carry down the putrid matters it may have ſwallowed. By this treatment, Mr. DEASE informs us, he has recovered every patient except one, ſince he had recourſe to this plan, which the world is much indebted to him for making public; though fortunately this complaint does not appear to be, by any means, a common one.

## INDURATION *of the* BREASTS.

IT would be improper to paſs over the ſlighteſt affection that has on any occaſion exceedingly alarmed parents, and ſometimes perplexed the younger part of the profeſſion. Of this kind are affections of the breaſts in female children, previouſly

to, or about the time of their beginning to enlarge. At this period, they ſometimes become very painful, and upon examination, a hardneſs and ſwelling are diſcovered, and in ſome inſtances, ſharp points may be felt, which are very painful when preſſed. The hardneſs is deep ſeated, around and behind the nipple, and is ſometimes looſe, at others ſomewhat fixed, and attended with ſevere lancinating pains, which have given riſe to diſagreeable ſuſpicions in regard to the probable nature of the complaint; and would, indeed, at a more advanced age claim ſerious attention. When happening in families addicted to ſcrofula, that diſorder is naturally ſuſpected, and ſometimes a morbid ſchirrhus has been feared. In ſome inſtances, only one of the breaſts is affected, and after ſome months, the other, or ſometimes both nearly at the ſame time.

A VARIETY of alterative medicines, aided by topical applications, have been adminiſtered in different inſtances, and continued for ſeveral months. Theſe have

ſome-

ſometimes taken away the pain, reduced the tumour, and diminiſhed the hardneſs; but have, in no inſtance, entirely removed the complaint. Yet no evil conſequence, in any inſtance under my eye has ever enſued, in patients at the above mentioned age; nor have I heard of any from other practitioners, though it has ſometimes been ſeriouſly apprehended.

The reſult of the whole has ſhewn, that the remote cauſe of the complaint has originated in an irritability of habit, in connexion with that diſtention of the parts, which at a certain age, nature always promotes.

The deſign of this chapter being to hold forth encouragement, from the probable harmleſs nature of the complaint, it were needleſs to point out the means, that on different occaſions, have been, ſometimes unneceſſarily, employed. I ſhall remark only, that keeping the body open and cool, with every other attention to the general health, muſt in every inſtance be proper.

## ABSCESS *in the* HYPOCHONDRIUM.

CHILDREN though leſs liable to this diſorder than adult perſons, are ſometimes attacked by it at an early age. It commonly ariſes from falls, or blows received on the part, or from lying on the graſs, and other ſimilar occaſions of a cold in the bowels. It is always attended, and ſometimes preceded by alvine complaints, and not unfrequently by the true cholera. In either caſe, there is always a pretty early appearance of tumour near, or upon the regio pubis, accompanied with great tenderneſs and pain, eſpecially to the touch.

THE intentions of CURE are directed to the pain, fever, and ſtate of the bowels. To theſe ends, the antiphlogiſtic plan is to be purſued, in order, if poſſible, to prevent ſuppuration. Therefore, ſoft opening medicines are required, ſuch as caſtor-oil, infuſion of ſenna with oil of almonds and manna, and ſuch like; with frequent clyſters,

ters, and afterwards opiates, and ſaline draughts, as the degree of pain and fever may demand. The part affected ſhould be fomented externally with the decoct. papav. albi, leeches ſhould be applied once or more, and afterwards a bliſter, if no relief be obtained, and the external tumour be not in the mean time increaſed. But if the parts become more ſwollen, a large bread and milk poultice ſhould be applied, and changed two or three times every twenty-four hours; and the matter let out as ſoon as may be. The ſuppuration being between the muſcles and the peritoneum, there will not be much diſcolouration of the ſkin, as is the caſe when matter is formed in the cellular, or adipoſe membrane, above the muſcles. Such a change therefore, muſt not be waited for; but an opening made as ſoon as any fluctuation can be perceived, leſt the matter ſhould make its way into the abdomen, or produce ſloughs and a foul ulcer. After the matter is let out, no other application is uſually required than

the ſame kind of ſoft poultice. The bowels muſt likewiſe be kept open by the gentle laxatives before mentioned, and the diet be very light, and of eaſy digeſtion; which ſhould be continued for ſometime.

## PSOAS, *or* LUMBAR ABSCESS.

FREQUENTLY as this diſorder takes place in adults, it is as often met with in younger ſubjects, and even ſuch as are only four or five years of age; and muſt therefore be ranked among the diſeaſes of childhood.

It is a true chronic inflammation, and like the laſt mentioned complaint, is often occaſioned by bruiſes, ſtrains, or lying on damp ground; and is not uncommonly connected with a ſcrofulous taint of the habit. The inflammatory ſymptoms being rarely ſevere, ſuppuration takes place ſlowly, and many months elapſe before the

the matter can be felt externally; which ſometimes points high up about the loins, hip, or groin, and at others, above the middle and on the inſide of the thigh: in the moſt benign, the abſceſs frequently burſts in the groin. It is, in any caſe, a very dreadful diſeaſe, and is noticed here, for the ſake of pointing out to young practitioners the firſt ſymptoms of this inſidious complaint, and marking the outlines of a practice which has proved the oftenеſt ſucceſsful.

A ſlight lameneſs and ſhortening of one of the legs, is, uſually, the firſt ſymptom. In a little time, the thigh is obſerved to be bent forward and upwards, which gives an appearance of depreſſion to the glutæi muſcles. But its moſt characteriſtic mark, in its early ſtage, is a ſenſation of weakneſs in the loins, with a tenderneſs about the origin of the pſoas muſcle, manifeſt upon a careful examination of the parts.

THE firſt indication is to procure a reſolution, if poſſible, upon the approach of theſe firſt ſymptoms, and before thoſe

of a hectical nature ſupervene; but unfortunately, they are too often over-looked, or miſtaken in the beginning.

With a view to a reſolution of the inflammation, recourſe ſhould be had to bleeding by leeches, and cupping; by bliſters, iſſues and ſetons; by emetics; purging with calomel; by the warm bath; a ſupine poſture, and low diet; and ſometimes, a cauſtic, or quicklime mixed with honey, applied near the lumbar vertebræ; but above all, as lately recommended, by electricity: a ſtimulus, which in all affections of the joints, previous to the formation of pus, is, perhaps, the moſt ſucceſsful.

Should theſe means fail, or advice be ſought for too late to expect any thing from them, of no leſs conſequence is the treatment, after the matter is formed; which ſhould be evacuated, by an artificial opening, as early as poſſible, and by a very ſmall aperture. If the abſceſs be large, one or more ſetons may be employed, in order to prevent the matter being

being too ſuddenly evacuated, as well as to keep up a beneficial ſtimulus, to induce the cavity to fill up. By theſe means, (which contain conſiderable improvement upon the ancient practice,) ſeveral very unpromiſing caſes have been recovered; but it would be unjuſt not to notice, that a more important improvement has been made by Mr. ABERNETHY, which is peculiarly adapted to very large collections of matter, and ſeems likely to render this diſeaſe, for ages uſually fatal, far leſs untractable.

THE principal circumſtance in this plan, is the making a ſmall opening in ſuch a manner and oblique direction, as to be capable of being cloſed again after having given vent to the preſent collection of pus; and repeating the little operation at ſuch intervals, and as often as ſhall be neceſſary. But for further information the reader is referred to the tract itſelf; it being both beſide my purpoſe to enlarge, and would be unjuſt to add any

any thing that might induce him to overlook the accurate account with which Mr. ABERNETHY has favoured the public.

NEVERTHELESS, as it is certainly the duty of every writer to offer what he accounts the beſt information; it becomes me to obſerve, that Mr. ABERNETHY's reaſons for emptying the cyſt both at firſt, and on every ſubſequent opening, are, at leaſt, controvertible. It has been thought by others to be an improvement to let out only a part of the matter in very large collections of it. And I have myſelf known ſome, and heard upon good authority, of other caſes, in which the latter method ſeems to have the preference; none of the evils from the diſtention of the cyſt, which Mr. ABERNETHY ſuſpected, having taken place.

Mr. ABERNETHY, however, as it appears from a more recent publication, retains his opinion, as the reſult of experience, and is now not anxious about the obliquity of the aperture. He, nevertheleſs, cloſes

cloſes it carefully, and aſſiſts its healing, and makes a freſh puncture as often as the abſceſs ſhall fill to a certain degree.

This ſentiment is ſubmitted to the public upon Mr. ABERNETHY's authority, having had no reaſon myſelf for altering my opinion; the only caſe I have ſeen ſince my former edition, in which the whole of the matter was evacuated, did not ſucceed.

Mr. ABERNETHY is further of opinion, that opium adminiſtered at regular intervals, and in doſes ſuited to the occaſion, has been very uſeful in mitigating the pain and irritability of the abſceſs, and in conſequence, the correſponding hectic fever.

WHEN the abſceſs has been ſome time opened, the diet ſhould be changed for one more cordial and nouriſhing, and the bark, ſteel, or vitriol be adminiſtered; and the patient enjoy a pure air, and take ſuch gentle exerciſe as his ſituation will admit of without an increaſe of pain.

I HAVE

I HAVE only to add, under the ſanction of a ſolitary caſe yet pending, that nature will endeavour to relieve herſelf, even in this dreadful diſeaſe, by abſorbing the pus, very many months after a large quantity has been formed. In this inſtance, wherein a lady was long confined to the houſe, and chiefly to her bed, through extreme weakneſs, and the weight of the limb; the ſize of the tumour is very conſiderably diminiſhed, the appetite greatly returned, and the uſe of the limb ſo reſtored, that ſhe is able to walk abroad, and partake of the ordinary comforts of convaleſcents who are yet in a weak ſtate.

## MORBUS COXARIS.

A VERY ſimilar, and equally dangerous diſeaſe with the above, is the MORBUS COXARIS, or abſceſs of the hip-joint; a complaint differing only in the preciſe ſeat of the diſeaſe. The ſwelling and pain

are

are here, indeed, more circumſcribed, and the abſceſs always gives way near the region of the joint. The preceding ſymptoms and treatment, however, much reſemble thoſe above mentioned. But the equivocal nature of the firſt appearances, and the difficulty of aſcertaining the probable degree of ſubſequent injury, are ſuch as will not allow of a diſcuſſion in detail in a work of this ſort.

I SHALL obſerve, however, that a degree of lameneſs is frequently the firſt thing noticed; and a ſhort time afterwards, both the thigh and the calf of the leg become ſenſibly leſſened. The patient alſo doth not ſtand equally on both legs, and the affected one projects outwards from the body; and in the end the thigh becomes ſhortened. It is generally attended with a ſevere pain in the knee, and very early an uneaſineſs in moving the head of the thigh bone in its ſocket. It occurs from infancy to manhood, and often derives its origin from trifling accidents. It is frequently at its firſt appearance miſtaken for other

other diſorders; accordingly, the paleneſs, languor, and liſtleſneſs that follow the firſt ſymptoms are often attributed to worms, and the tumour itſelf conſidered ſimply as ſcrofulous; whence an erroneous practice is frequently adopted. It is, moreover, miſtaken for rheumatiſm and ſciatica in adults, and in children, for indolence and trivial accidents.

ON the head of treatment, I ſhall only obſerve, that in a view to procuring a reſolution, which is the firſt intention, the means can differ but little from thoſe preſcribed for the foregoing complaint; and we have the authority of the late Mr. POTT* for expecting conſiderable benefit from iſſues or ſetons, applied in the manner directed for the palſy of the lower extremities. Should an abſceſs, nevertheleſs, be formed, its after treatment muſt vary conſiderably according to the degree of injury of the joint, and adjacent parts. Nothing, however, will

* See *A ſhort account of his life*, by Mr. EARLE.

con-

contribute more to the cure, than long and ſtrict reſt of the limb.*

## ABSCESS *under the* FASCIA *of the* THIGH.

THE nature of this depoſit is ſo much of a kind with the two preceding ones, as well as ſo much leſs dangerous, that it would be needleſs in this work, to do much more than mention it in its place.

Mr. ABERNETHY is of opinion that the whole of the matter ſhould in this caſe alſo be evacuated, and by a larger opening than for the lumbar abſceſs; and does not, therefore, adviſe a reunion of the lips of the orifice. I have, however, ſeen the method which I have noticed as ſucceſsful in the former, equally ſo in this abſceſs; and from the reſult in one very bad caſe, am diſpoſed to think, there may be conſiderable advantages in cloſing the

* For a full account of theſe abſceſſes, readers are referred to a Treatiſe by Mr. E. FORD.

aperture,

aperture, and making freſh punctures as the matter ſhall collect.

## WHITE SWELLING *of the* JOINTS.

I SHALL be equally brief alſo on this article, the diſeaſe being well known to every ſurgeon; and my intention in naming it being only to mention, from experience, a few remedies that have been found ſucceſsful in young ſubjects, if had recourſe to in good time, and before matter has been formed. Such are, the repeated application of eight or more leeches, and afterwards ſmall bliſters to the joint; gentle frictions of the part; two or three vomits a week; with entire reſt of the limb; and in the end, ſea-bathing, eſpecially if the patient be of a ſcrofulous habit. It has been ſaid, that a poultice of boiled turnips, with a lump of hogs-lard, applied twice a day, has, in ſeveral incipient caſes entirely removed the complaint. And in a few inſtances

that

that I have known, electricity has had an immediate, and wonderfully good effect, even where the joint has been conſiderably enlarged, the pain very great, and the child incapable of ſtraightening the limb.

## PARALYSIS *of the* LOWER EXTREMITIES *with* CURVATURE *of the* SPINE.

THIS complaint has been of late years ſo thoroughly announced, that it ſhould ſeem unneceſſary for moſt readers to enter into a minute detail of it after the accurate deſcription given by the late Mr. POTT, whoſe early account and judicious treatment of this dreadful diſeaſe has added luſtre to the reputation acquired by his former publications. Some late obſervations have, indeed, ſeemed to detract both from his merit, and expected ſucceſs; I can, nevertheleſs, from my own experience vouch for the great utility of the plan in this morbid deformity.

It will be proper, however, carefully to diſtinguiſh it from the ſimple curvature of the ſpine, in which a greater number of vertebræ is concerned, and the legs are not peculiarly affected; as well as from a complaint preſently to be noticed, under the name of *debility* of the *lower extremities*, in which there is no manifeſt change of figure in the ſpine.

THE Palſy of the lower extremities is certainly confined to no age, and being at firſt very frequently miſtaken in young children for the trifling effect of ſome fall or ſtrain, is intitled to peculiar notice in this work. I have never met with it, indeed, where it has not been preceded by ſome fall or violent exertion, though as Mr. POTT has obſerved, ſuch ſuppoſed accidents are ſeldom much noticed previous to the debility taking place; though it is, indeed, probable, there may be ſome prediſpoſing cauſe, without which no common ſtrain would induce ſo much miſchief in a part continually expoſed to accidents.

The

The Curvature is generally in the neck or back, though ſometimes in the upper part of the loins, and varies in extent and degree according to the number of the vertebræ that may be affected. The firſt ſymptom noticed by children of an age capable of expreſſing their feelings, is an increaſed ſenſibility, and irregular twitchings in the muſcles of the thighs. This is ſucceeded by a diſlike to motion, eſpecially to moving briſkly; the patient on ſuch occaſions finding himſelf likely to fall, his legs getting entangled through their weakneſs, and a diſpoſition to croſs each other, in his attempts to ſtep forward. Soon after this, he perceives himſelf unable to ſtand upright long together, and that the legs and thighs have loſt much of their natural ſenſibility. Matters ſeldom continue long in this ſtate, and the weakneſs increaſing, patients loſe more and more the uſe of both the lower extremities, till ſome are unable to move them at all even in bed; and theſe advances of the diſeaſe are ſaid to be more

rapid in adults than in infants. In the latter, I have particularly remarked that rigidity of the ankles noticed by Mr. POTT, by which the toes are pointed downwards, ſo that the heels cannot be brought to touch the ground.

As my intention is only briefly to point out the diſeaſe, and the propereſt means of relief, it is not of importance to enter into a further detail of the progreſs of this diſorder, and of other complaints which are induced by it whenever the original diſeaſe has been long neglected.

THE obvious Remedy is that firſt happily ſuggeſted by Mr. POTT, and is nothing more than a large iſſue or ſeton placed on each ſide the curve, at ſuch a diſtance as may prevent their burſting into one. Where the curvature comprehends three or more vertebræ, the ſeton may be preferable to an iſſue, but if the latter be on any account elected, I ſhould adviſe its being made by the knife rather than a cauſtic; not only as being leſs painful, but alſo for the very

effect

effect Mr. POTT has disapproved of, I mean, the consequent inflammation before there has been time for suppuration to take place. It may, indeed, be doubted, whether the benefit derived from the issue may not arise rather from the inflammation and stimulus produced on the surface, than from the discharge; to which, nevertheless, Mr. POTT solely attributes the cure.* In a recent case, however, and

* IT has been a common idea, that the discharge furnished by an ulcerated surface is the source of all the benefit that may be derived from abscesses, unless blistered surfaces be an exception; in regard to which, physicians have usually considered the stimulus produced by the cantharides as the chief mean of benefit, especially in cases of great local pain and inflammation. It is, indeed, matter of some surprize, that thinking men have not more generally adopted the like idea in regard to other inflamed surfaces, whether induced by natural or artificial means. It should surely seem, that *that* state of the system, or of the parts, by which suppuration is induced, is more likely to be the occasion of benefit, than the discharge of a large portion of the richest animal juices, which is but the consequence of the other. Thus, in most critical abscesses, the fever is found to abate as soon as

and a very unpromiſing one, in an infant ten months old, a very ſenſible relief was afforded as ſoon as the inflammation took place, and before any ſuppuration appeared; and though the child had been many months a cripple, with loſs of health and appetite, unable to ſupport its head, and the ſternum very much diſtorted, the relief was ſo great in one week after the inciſions were made, as left no room to doubt of a perfect recovery; which accordingly took place a ſhort time afterwards, without any deformity remaining. Had Mr. POTT advanced any other reaſons for the preference given to the cauſtic, or merely aſſerted ſuch preference, I

the external inflammation takes place, and the patient inſtead of being afterwards benefited by a copious diſcharge is not unfrequently hurried by it into a fatal maraſmus, when the abſceſs has been large, or improperly ſeated. There may be other inſtances, indeed, in which the ſuppuration, and even the great quantity of the diſcharge, may be beneficial to the ſyſtem; but it is probable, that this is not in general the caſe, and much leſs in the preſent inſtance, which is attended with ſymptoms of general debility.

ſhould

ſhould readily have ſubmitted to the great experience he has had in this dreadful complaint; but though I may very poſſibly be miſtaken in my reaſoning, it appeared a duty juſt to ſtate it, as well as to notice this inſtance in point, in a diſeaſe of ſo much importance.

The iſſues ſhould be kept open till the patient perfectly recovers the uſe of his legs, or even a while longer, at leaſt one iſſue, which ought not to be dried up till the patient can walk firmly alone, and ſhall have recovered all the height which he may have loſt in conſequence of that ſtooping which the diſorder had induced.

In addition to the uſe of theſe means, Mr. POTT has ſuggeſted thoſe of cold-bathing, frictions, the bark, and ſuch like; but I have myſelf never ſeen any benefit from any thing where the iſſues have failed, which I have found efficacious where no other remedy has been made uſe of. After the recovery, how-

ever, if the patient is of a ſcrofulous habit, ſea-bathing is peculiarly indicated.

The *moxa* has been ſucceſsfully made uſe of in one inſtance, by Mr. GIMÈS,* after the cauſtic, as directed by Mr. POTT, is ſaid to have failed. But as the burning was ſeveral times repeated, and the recovery appears to have been unuſually ſlow, it is not very certain, but a repetition of the cauſtic might have proved equally beneficial.

## DEBILITY *of the* LOWER EXTREMITIES.

THE diſorder intended here is not noticed by any medical writer within the compaſs of my reading, or is not ſo deſcribed as to aſcertain the diſeaſe. It is not a common diſorder any where, I believe, and ſeems to occur ſeldomer in *London* than in ſome other parts. Nor am I enough acquainted with it to be fully ſatisfied, either in regard to the true cauſe,

* *Jour. de Med. Fev.* 1788.

or

or ſeat of the diſeaſe, either from my own obſervation, or that of others, except in the inſtance of teething, or of foul bowels; and have not myſelf had an opportunity of examining the body of any child who has died of this complaint. I ſhall therefore only deſcribe its ſymptoms, and mention the ſeveral means attempted for its cure, in order to induce other practitioners to pay attention to it.

IF it ariſes from teething, or foul bowels, the uſual remedies ſhould be employed; and have always effected a cure. But the complaint more commonly ſeems to ariſe from debility, and uſually attacks children previouſly reduced by fever; ſeldom thoſe under one, or more than four or five years old. It is then a chronical complaint, and not attended with any affection of the urinary bladder, nor with pain, fever, nor any manifeſt diſeaſe; ſo that the firſt thing obſerved is a debility of the lower extremities, which gradually become more infirm, and after a few weeks are unable to ſupport the body. There being no ſigns of worms, nor other foulneſs

of

of the bowels, mercurial purges have not been of any uſe; neither has the bark, nor hot, nor cold-bathing. Bliſters, or cauſtics on the os ſacrum, and the great trochanter, and volatile and ſtimulating applications to the legs and thighs, have been chiefly depended upon; though there is no appearance of an enlargement of any of the vertebræ, nor of ſuppuration in the external parts, and therefore no reſemblance to the inflammation of the intervertebral cartilages, the pſoas abſceſs, nor the morbus coxaris of *De Häen*.

When only one of the lower extremities has been affected, the above means, in two inſtances out of five or ſix, entirely removed the complaint: but when both have been paralytic, nothing has ſeemed to do any good but irons to the legs, for the ſupport of the limbs, and enabling the patient to walk. At the end of four or five years, ſome have by this means got better, in proportion as they have acquired general ſtrength: but even ſome of theſe have been diſpoſed to fall afterwards

wards into pulmonary conſumption, where the debility has not been entirely removed. On this account it may be ſuſpected, that the complaint is ſometimes owing to ſcrofula: and I have been very lately informed by a gentleman of character in the country, that he has ſeen one inſtance of a paralyſis, or debility of this kind, in which, upon opening the body after death, the internal ſurface of the lower vertebræ lumborum was found carious, though there was no abſceſs of the pſoas muſcle, nor external tumour on the back, nor loins.

I HAVE ſeen a ſimilar debility ſeize grown people, eſpecially women, after ſome very long illneſs, and has continued a year, or more; during which time they were utterly incapable of walking without the help of crutches. Theſe caſes, however, have always been attended with great pain in the commencement of the complaint, though without tumour of the limbs; and have ſeemed to be benefited by the external uſe of the waters at *Bath*.

Disco-

## DISCOLOURATION, *accompanied with* DEBILITY *of the* LIMBS.

ATTENDANT upon debility of the lower extremities, there is sometimes a discolouration equally distinct from those already mentioned, and another yet to be noticed. It takes place at a more advanced age, and seemingly in consequence of previous bad health. I know of no writer who has noticed such a complaint, and have not met with it often enough to be distinctly acquainted with its nature; nor have I, as yet, fairly seen the result.

Children so affected have gone off their feet, as it is called, or dragged them only very feebly, after having been able to walk stoutly for some time. They have become in every respect weak and languid; their head has grown large, and their limbs become emaciated, but do not feel cold to the touch, though of a deep leaden-blue colour from the fingers and

and toes to the elbows and knees; with the face almoſt equally diſcoloured, and like that of adults in a fit of aſthma. A fall, or ſuch like accident, has ſometimes been ſuſpected as the cauſe of theſe ſymptoms, but unſupported by any appearance on the vertebræ, or other parts.

THE bark and cordials have been made trial of without any advantage; and cold-bathing has ſeemed to be prejudicial. The application of leeches to the livid parts, friction, ſpirituous and volatile embrocations, and bliſters; repeated electricity; tepid ſea-bathing; ſteel, exerciſe, and a generous diet, are the means I have hitherto directed, after purging with calomel; but as yet, I have ſaid, I am not able to ſtate their certain effects.

IN ſeveral inſtances, a diſcolouration of this kind, appearing only at times, and recurring again, during many months; attended with cough and occaſional difficulty of breathing; has diſappeared totally as children have acquired general ſtrength and good health, without any mani-

manifeſt advantage from the means that have been uſed.

## CURVATURE *of the* BONES *from* WEAKNESS.

CROOKEDNESS of the bones, particularly thoſe of the lower extremities, has been mentioned as a common conſequence of rickets, and may claim a tranſitory notice.

THE principal inquiry in the treatment of deformities of this kind, reſpects the uſe of irons for the ſupport of the limbs, whenever the diſtortion happens to be conſiderable. The propriety of this aſſiſtance has, indeed, been doubted by ſome practitioners, as well as their unpleaſant appearance objected to by parents; who have therefore been inclined rather to truſt only to cold-bathing. Friend, however, as I am to the latter, I may venture to ſay from experience, that it is likely to be prejudicial at the time it is often had

had recourſe to; for by ſtrengthening the ſyſtem, it rather ſerves to confirm the crookedneſs which the bones have already contracted. It is an advantage, on the other hand, that the bones remain ſoft and yielding as long as the curvature is conſiderable, if ſo be the preſſure of the ſuperior parts be at the ſame time duly counteracted. To ſupport the limbs, therefore, with irons, as long as the ſoftneſs of the bones diſpoſes them to yield under the weight of the body, is certainly a rational intention, and has been very beneficial in numberleſs inſtances. This end obtained, the bones being ſtill lenthening as the child grows up, they naturally incline to become ſtraight; and at this time the cold-bath and other tonics are properly indicated, and will co-operate to the cure of the complaint. The only care required, is, that the irons be made as light as poſſible, and be properly adapted, and that they be lengthened as often as may be neceſſary. It is, poſ-

poſſibly, for want of due attention to this laſt particular, that irons have in ſome inſtances been really found to do harm; the reaſon for which muſt be obvious to every one,

WHEN a curvature takes place in the ſpine (without any diſeaſe of the vertebræ or cartilages) the like method ſhould be taken. Proper inſtruments to ſupport the head and upper parts of the body have been contrived by different artiſts, but thoſe made by Mr. JONES appear to be the beſt. There is, indeed, a ſlight diſpoſition to this curvature in ſome children of a ſcrofulous habit, that does not require ſo inconvenient an inſtrument; and for which the ſtays made by LAURIE and HOLMES in Bartholomew Cloſe may therefore be preferable.

SHOULD the bones of the arm be curved, either by accident or diſeaſe, in this ſoft ſtate, rollers and paſteboard ſplints properly applied, will be ſufficient to ſupport, and reſtore them to their natural form.

But

But if the injury extend to the hip and contiguous bones, it will not be manifeſt at the time; and when diſcovered, can be benefited only by the cold-bath, and other general remedies. If this diſtortion ſhould be conſiderable, it may, indeed, become a ſource of manifold evils in females, as will be noticed in another place.

## PARONYCHIA.

MANY young people are very ſubject to a mild ſpecies of this complaint, which being perfectly ſuperficial, is not improperly termed the cutaneous whitlow, and will attack the ends of the fingers, ſeveral times in a year, without any previous injury of the part. The ſubject is therefore introduced here chiefly with the deſign of recommending a prophylactic which I have frequently ſeen ſucceſsful. This conſiſts only in bathing the fingers, ſeveral times a day, in the following

mixture, the moment that a ſenſe of any perternatural heat, or pain, ſhall be felt.

℞. Miſturæ camphoratæ ℥iv.
Ag. litharg. acetati ʒij
Tinct. opii ℥ ß
Miſceantur.

IN the malignant, or deep ſeated whitlow, doubtleſs, the beſt method is to make an early opening down to the bone, which will occaſion the patient much leſs pain, than allowing the matter, gradually, to make its own way to the ſurface; which is likewiſe always attended with much miſchief to the parts.

I ſhall only add, that in the commencement of the tumour and pain, nothing can be more improper than the recourſe ſo commonly had to a bread and milk poultice; inſtead of which, where poultices are required, thoſe made with the water of acetated litharge are abundantly preferable, and ſhould be applied only very moderately warm.

FURUN-

## FURUNCULUS.

THE common Boil only is intended here; and is noticed from its frequency in young people towards the time of puberty, who are ſometimes vexed with a ſucceſſion of them. This is the true phlegmonic inflammation, and is therefore moſt acutely painful, and the ſkin of a deep red colour before the ſuppuration is complete. Though oftentimes hurtful in older ſubjects, they are, however, juſtly accounted ſalutary in others, and do harm only when repelled, or haſtily dried up. If a poultice of bread and milk, therefore, be applied from the firſt; (if the boil be in a convenient part, otherwiſe a gum-plaſter); and the abſceſs dreſſed with any warm digeſtive as ſoon as the ſkin gives way, the ſlough, which the boil always forms, will ſoon be thrown off. It is ſometimes for the want of this,

that another boil forms in the neighbouring parts, or the child is teazed with ſore eyes, or ſome humour, as it is termed, on the ſkin.

Two or three doſes of purging phyſic may be taken, at proper intervals, after the boil is healed.

## PERNIONES.

THIS is a complaint ſo well known, that it can need no deſcription. It is generally owing to the circulation of the blood in the minute veſſels of the extremities being checked, by a child having been long expoſed to cold or wet, and afterwards running to the fire inſtead of recovering the natural heat by general exerciſe, and friction of the parts affected. If the injury be exceedingly great, as it ſometimes is when a perſon has lain for ſeveral hours in the ſnow, the circulation cannot always be reſtored, and ſome parts actually

actually mortify. To prevent this, if poſſible, inſtead of bringing the perſon near a fire, he ſhould be immediately ſtripped, and well rubbed all over, eſpecially the parts moſt affected, with ſnow, and afterwards with ſalt and water, and be then put into bed. If neither ſnow, nor ice be to be had, cold water ſhould be made uſe of, or flannel ſprinkled with ſpirit, or volatiles. If the parts be turned black, which they often are when they are what is called froſt-bitten, the patient, eſpecially if a young child, ſhould be confined to the bed, as long as the weather is ſevere, and the parts continue diſcoloured. But my intention is to treat chiefly of ſlighter attacks; on the firſt appearance of which, known by the heat, itching, redneſs, and ſwelling of the heels, toes, or fingers, the parts may be well rubbed with a ſoft bruſh, or ſoaked in ſmiths forge-water, and afterwards rubbed with muſtard and brandy, ſoft ſoap, or ſalt and onions; or they may be embrocated with the liniment. ſaponis,

or ſpirit. camphoratus, to two ounces of which may be added a tea-ſpoonful of the aqua litharg. acetati. But I have, for ſome years, experienced the good effects of far ſimpler means than any of theſe, and which I have hitherto never found equalled by any of the warmer remedies alone. It may, indeed, be made uſe of together with them; and is nothing more than the cerat. ſperm. ceti ſpread on a large piece of thick lint, or the emplaſt. ſaponis on cloth, to be applied as ſoon as the extremities begin to itch, or be painful: or if this ſhould not very ſoon be of uſe, both embrocating, and covering the parts with compreſſes wrung out of the aqua ammoniæ acetatæ, which ſhould be continually preſerved moiſt.

SOME children are diſpoſed to have chilblains every winter; as a preſervative againſt which, if it be the hands that are liable to be affected, warm leather gloves ſhould be worn, (avoiding woollen, which in theſe caſes is unfriendly to the ſkin;)

ſkin;) and above all, wearing for a few hours in the day or night, and eſpecially when abroad in the cold, oil'd-ſilk gloves, which is one of the beſt preventives both of chilblains and of chopped hands, that has been hitherto known. But if the feet are uſually the affected parts, the heels only may be covered by a piece of waſhing-leather, and over this a piece of oil'd-ſilk, ſecured round the inſteps, and worn day and night during the cold months; and ſhould be taken off only for the purpoſe of waſhing them, and rubbing the parts with the bruſh or liniments, as mentioned above.

WHEN the ſwellings are broken, it is common to dreſs the ſores only with a little cerate, and to wait for the return of warm weather, when they uſually heal of themſelves; but by this means, they often remain bad through all the winter, and when large, are ſometimes not well till the ſummer is very far advanced; and I have even ſeen them remain very

bad both in children and grown people, at the end of *September*.

After having attended great numbers in this complaint, I am ſatisfied that this kind of ſore requires applications ſomewhat more invigorating, being a ſpecies of mortification; and though it will not always endure very warm digeſtives like many other ulcers, yet when the chilblains are pretty large, a portion of ſome digeſtive joined with the cerate, is very friendly to them. And I have known ſome ſores, though very ſmall, which had remained in a very obſtinate and tedious ſtate long after the breaking up of a hard froſt, whilſt they had been dreſſed only with cerate, or other mild, or drying applications as they are called, begin to heal immediately upon adding a ſmall portion of ſome warm digeſtive, and applying a flannel roller, without any other alteration in the plan. But if they are ſpread to any conſiderable ſize, nothing contributes ſo much to their healing, as touch-

touching the ſores every day with bracing and invigorating lotions, particularly, diluted ſolutions of ſteel, or tincture of myrrhe; which in a very few days will produce kindly granulations in theſe, and other cold ſores, though of long ſtanding.

WHEN the parts are much ſwollen, and the ſores been long foul, it will be often neceſſary in ſevere weather, to make uſe of poultices, of which thoſe made of rye-meal and the compound water of acetated litharge are more active, and therefore preferable to bread and milk: the latter however, if a little brandy be added to it, anſwers very well in many caſes. If theſe are applied over the above dreſſing of cerate and digeſtive, and changed twice a day, the ſores will heal in much leſs time than by any of the common applications I have ſeen uſed; eſpecially if the parts ſurrounding the ſore be well rubbed with camphorated ſpirit. If children be not very young, purging them with a little calomel twice a week, will

will often expedite the healing of the ſores: in the worſt caſes, a decoction of the bark, as well as cordials, and a generous diet, are required.

I have now for many years had ſtrong proofs of the good effects of electricity in chilblains, both as a remedy and a prophylactic, eſpecially in very old people, many of whom are afflicted with them every winter.

## AMBUSTIONES.

BURNS and ſcalds are mentioned by ſome old writers, and though a misfortune by no means confined to young people, they too often fall to the lot of infants, through the careleſsneſs of their attendants: and for want of being properly treated at the inſtant, children often ſuffer exceedingly, when a fit application would have rendered the injury trifling.

WHEN

WHEN ſuch an accident happens, the neareſt aſtringent at hand ſhould be made uſe of, ſuch as brandy, or other ſpirit, wine, or even cold water, till ſomething more proper can be procured; into which the injured part ſhould be plunged, or be covered with pieces of cloth dipped in ſuch liquors, which will prevent the bliſtering of the part; or, in the momentary want of any of theſe, holding the injured part before a moderate fire. As ſoon as it is poſſible to procure officinal remedies, the following will be very proper.

℞. Aq. calics LBj.

—— litharg. acetati ℥ ß

Spir. vini Gall. ℥ij.

Miſceantur.

Where ice can be conveniently applied, and renewed day and night, it will be found one of the beſt early remedies in very bad caſes.

IF the injury has been too long received to admit of much relief by theſe means, and deep ſloughs are actually formed, a very proper dreſſing may be made of equal

equal parts of cerāt. è lapide calamin. and unguent. ſambuc. viride; diminiſhing the proportion of the latter as the ſloughs ſhall be thrown off, and the ſores become diſpoſed to heal. But ſhould the injured ſurface be large, or the pain occaſioned by removing the dreſſings, be very great, it will be ſufficient to cover the parts with pieces of linen dipped in cold-drawn linſeed-oil, which ſhould be moiſtened every day, and ſuffered to adhere till the ſores are in a ſtate to admit of being dreſſed in a common way.

A STRONG ſolution of ſoap in water has long been in uſe with artificers employed in any buſineſs expoſing workmen to very bad ſcalds; and is a very excellent remedy.—About three quarters of an ounce of ſoft ſoap is a proper quantity for a pint of water. But the ſoap taking ſome time in diſſolving, and requiring a certain proportion of boiling water, the lotion cannot be made cool enough for immediate uſe by the addition of the proper quantity of

of cold water; a remedy, therefore, more convenient, and perhaps more efficacious, may be made of ol. oliv. aq. fluv. frigid. and aqua kali puri. Six ounces of oil to ten of water, with two drachms of the ley will make a pint.—This quantity may be ſufficient for a burn on the hand or foot; which is to be immerſed, and kept about half an hour in the liquor, which will remove the injury if had recourſe to immediately; but muſt be repeated, as the pain may require, if the ſcald or burn be of ſome ſtanding. Could a perſon ſcalded all over, be inſtantly put up to the chin in a cold-bath of this kind, and the head, at the ſame time, be frequently immerged, or well waſhed with the liquor, I believe very little injury would enſue.—Whatever ſores may be formed, ſhould be treated afterwards according to the foregoing directions.*

LUXA-

* FOR ſome new ideas on the nature of burns and their treatment, the reader is directed to *an Eſſay*, written by Mr. KENTISH, 1797.

As

## LUXATIONS *and* FRACTURES.

INFANTS are not only liable to theſe misfortunes by a fall from the lap, but the bones, or joints, may ſometimes be unavoidably injured in the birth. There is in this caſe, ſeldom any luxation, I believe, but of the ſhoulder; which is not difficult to be reduced, and requires nothing afterwards, but that the limb be kept perfectly quiet.

IT is very common for nurſes, eſpecially during the month, to ſupport the lower-jaw of an infant whenever it happens to yawn, in the apprehenſion that the jaw might otherwiſe, be diſlocated. This practice is, at leaſt, an evidence of the nurſe's

As a more curious novel deviſe in a view to leſſening the pain and inflammation conſequent to burns, the metallic tracters of Dr. PERKINS, to which ſuch marvellous effects have been attributed, can be mentioned only in the way of caution not to depend on them.

atten-

attention, and can do no harm, though I have, indeed, never known the accident happen. Should it, however, take place, either at this age, or in older children through ſome violence, it will occaſion a very awkward appearance, and prove very diſtreſſing to the child, who will be diſabled from taking any nouriſhment till the luxation be reduced. Nothing more, however, is required to this end, than to place the thumb of each hand in the back of the mouth, and the fingers on the outſide, under the jaw, ſo as to depreſs, and at the ſame time bring it a little forward, to diſengage the head of the condyle, and then force the jaw ſuddenly back.

FRACTURES, indeed, are not quite ſo eaſily managed as luxations, and perhaps happen more frequently. The bones are yet but little more than griſtle, and if ſtrained beyond a certain degree, are eaſily bent, or even broken. The former is very readily reſtored, but I ſhall be more particular

particular on the latter, as the ſubject is of ſome importance.

FRACTURES in the birth are uſually of the collar-bone, the arm, or the thigh; the treatment of the two former of which, will include all that is neceſſary to be obſerved of ſuch as may happen in other parts.

The firſt, however, requires very little attention, as it will be neceſſary only to draw the ſhoulders back, confining them in that poſture, by two or three pins in the clothes, and to apply a piece of the empl. litharg. cum reſina, or emplaſt. ſaponis, ſpread on leather, upon the riſing end of the bone, and a larger piece over the firſt.

A FRACTURE of the arm demands a little more attention, but will always end perfectly well. The difficulty conſiſts in keeping the fractured ends of the bones appoſed to each other, without rolling up the arm ſo tight as to occaſion pain, or much ſwelling of the hand, which in a new-

new-born infant, a very ſmall preſſure will effect. I have found no method ſo well adapted as the following, which allowing of a little tumour about the fractured part, without the neceſſity of looſening the roller, preſerves the ends of the bones in due contact, without drawing the roller ſo tight as to prevent the free return of blood from the inferiour parts of the limb.

To this end, three little ſplints, about half an inch in width, and an inch and a half long, may be made of fine linen cloth, five or ſix times folded together, to the thickneſs of common paſteboard; and being ſoaked in a mixture of flour and white of egg, ſhould be placed in the uſual manner, along the fractured ends of the bone. Being applied wet, they will accommodate themſelves exactly to the figure of the limb, and when become dry, will be ſufficiently ſtrong to ſupport the bones. They ſhould be applied immediately on the ſkin, without the intervention of a roller, by which means, when

the parts ſwell, which they ſhould always do a little, there will be ſpace enough between them to allow of it, notwithſtanding the preſſure from the roller; which ſhould be applied over them. This ought to be of very fine flannel, and ſhould not be drawn near ſo tight as for adults, nor will there be occaſion for it, as the chief dependance ought to be on faſtening the arm down cloſe to the ſide, by ſtrong pins fixed into the little gown, in the manner the ſurgeon may beſt contrive at the time. The gown, therefore, ought not to be changed, nor the arm moved, but in his preſence: and if the hand be not inflamed, nor very much ſwelled, and the child continue eaſy, the part will not need to be opened under eight or ten days. Till this time, the ſame gown ſhould be worn, and be preſerved clean by ſuch coverings as may be eaſily removed. The ſpeedy union of the bones will depend upon a ſtrict attention to keeping the limb as ſtill as poſſible; and if it be ſo preſerved, the accident will afford very

little

little trouble after the firſt ten or twelve days, and at the month's end, the child will move that arm nearly as well as the other.

## *On* CUTTING *the* TONGUE.

THE directions on this head, as well as the notice taken of many of the following little diſorders, proceed rather from a deſire that nothing on the ſubject of children's complaints ſhould be omitted, than from their real importance. Some of them, indeed, have been entirely overlooked by preceding writers, and though they may ſeldom require much attention, it may ſometimes be of advantage to know what has been ſerviceable in ſimilar caſes.—The inſtance under conſideration, however, is too trifling a matter to dwell upon. And, indeed, the little operation, performed in order to lengthen the tongue, is very frequently called for where there

is no abſolute occaſion for it, the confinement being ſeldom ſo conſiderable as to make it really neceſſary to divide the frænum. The child will ſuffer ſo very little, however, in the operation, that when it is carefully done, it will be attended with no inconvenience; and if it can afford the mother any ſatisfaction, it will be very proper to comply with her requeſt. It ſeems therefore only neceſſary to add, that ſome little care and ſteadineſs are required, or the ſublingual veins may be wounded, and in conſequence an infant may loſe its life. To avoid this danger, the bridle may be divided by a ſmall curved biſtoury, inſtead of ſciſſars. The handle and blade, when open, need not exceed two inches in length; and the point ſhould be a little curved, and the back made broad, whereby the point may be eaſily forced through the frænum in the moſt troubleſome caſe, whilſt the back of the inſtrument will ſufficiently preſs down the veins, ſo as to be entirely out of the way of being injured.

jured. Theſe cautions have been judged by ſome people to be very trifling; but beſides that infants have actually bled to death, the following equally fatal accident has ariſen from cutting too deep, which I ſhall therefore notice in this place, as well as deſcribe an inſtrument contrived for ſuppreſſing the bleeding.

## SUFFOCATION *from* SWALLOWING *the* POINT *of the* TONGUE, *and* HEMORRHAGE.

THE occaſion of this accident, it has been ſaid, is cutting too deep in dividing the frænum: I have here to notice its ſymptoms and remedy. The former are thoſe uſually attending ſtrangulation, and come on ſuddenly, and without any probable cauſe but that of the tongue having been cut; but to which they are ſeldom attributed by thoſe who are ſtrangers to the complaint. The infant appears greatly agitated; the face turns black; and un-

leſs theſe ſymptoms ſoon diſappear, the child goes off in a convulſion. But if they are preſently removed, the infant is as ſuddenly well; though they generally return again, and have in ſeveral inſtances proved fatal.

MR. PETIT * has perhaps the credit of diſcovering the true cauſe of the complaint. The remedy conſiſts in nothing more than bringing the tongue into its proper place, and if the infant be ſuckled, putting it immediately to the breaſt, which will give the tongue a natural direction. Should the child be brought up by hand, the tongue ſhould be watched for ſome time, at leaſt till the bleeding ſhall be ſtopped; the complaint taking place only in conſequence of that being conſiderable, ſo as to become an inducement to the infant to continue ſucking at the part.

WHEN the ſublingual veins are actually wounded, the danger, it has been ſaid, is

* *Memoires de L'Acadèmie de Sciences.*

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conſiderable; and it is to Mr. PETIT that we are again indebted for the beſt contrivance for ſuppreſſing this hemorrhage. The means conſiſt only of a piece of ivory, in the form of a ſhort fork; the prongs of which ſhould be ſo placed as to preſs againſt the apertures in the veins, and the other end againſt the inſide of the lower jaw, and ſhould therefore be broad and ſomewhat convex, that it may keep its place.

## HEMORRHAGE *of the* NOSE.

THIS complaint was hinted at in the chapter on Sneezing, and is likewiſe met with among the old writers, I ſhall therefore beſtow a few words upon it, though it is not often of much conſequence, I believe, before the age of puberty.

If a child be feveriſh, or otherwiſe unwell, the hemorrhage is often a mere ſymptom ariſing from the complaint un-

der which it labours, and will diſappear upon that being properly treated. But a bleeding at the noſe ſometimes takes place in the healthieſt children, the veſſels of this part being weaker than thoſe which are covered by the true ſkin, and often afford a ſalutary outlet, in caſe of plethora, and therefore uſually contract when the intention of nature is anſwered; after which, a doſe or two of cooling phyſic ſhould be given. But it may be ſometimes neceſſary to draw a little cold water up the noſe, to which ſome vinegar may be added; to compreſs the noſtril from which the hemorrhage ariſes; and confine the patient as much as may be to an upright poſture. Should theſe little remedies fail, the head, hands, and feet, may be bathed with cold vinegar and water, and the noſtrils be ſtopped up with doſſils of lint, which upon urgent occaſions muſt be dipped in warmed oil of turpentine, or other ſtyptic liquor, and muſt extend to the poſteriour aperture. The laſt means will almoſt always ſucceed;

ceed; but if otherwiſe, ſome blood ſhould be taken from the arm, if the pulſe does not forbid; the feet be bathed in warm water, and the body kept open by manna, and cream of tartar; and the patient ſhould live for a long time pretty much upon whey, vegetables and milk; at leaſt, he ſhould not dine wholly upon animal food.—In the intermediate days of purging, the teſtaceous powders, and tincture of catechu may be taken; and in ſome inſtances the bark, or the *Nevil-holt* water will be proper.

## HEMORRHAGE *from the* NAVEL.

THE navel of new-born infants is liable to ſeveral diſorders, ſome of which are of conſiderable importance; but I ſpeak in this chapter only of the ſlighter ones. Of theſe, one is an oozing of blood from the part, after an unkindly ſeparation of the cord, and is owing to the ſhooting

up

up of a ſoft fungus, which prevents the ſkin from covering the divided veſſels in the manner it otherwiſe does. This rawneſs, however, is not always attended with hemorrhage, as will be noticed in the next chapter, but when it is ſo, the bleeding has ſometimes continued for ſeveral months, and in ſome inſtances, in ſuch quantity as to prove alarming to the friends of the child, leſt it ſhould in the end be injurious to its health. The little veſſel from whence the blood iſſues, lies always ſo deep that it cannot be ſecured by ligature, nor be conveniently cauterized; the latter of which, indeed, would be very diſagreeable. I have, however, conveyed the lunar cauſtic to the part, which has ſtopped the bleeding for a time; but it has always returned. Nothing further, however, is neceſſary, than to adapt a proper compreſs, and ſecure it by ſticking plaſter and bandage; which ſhould be continued for two or three weeks; or it may be reſtrained merely by a ſmall doſſil of lint, and croſs

ſtrips

ſtrips of ſticking plaſter applied in the manner directed for the rupture at this part.

THERE is, indeed, another kind of hemorrhage of more importance, but this ſeems to be ſympathetic, and is attendant upon infants who are in an ill ſtate of health during the month, and is, perhaps, a bad ſign. It takes place where the cord has been apparently well healed; but the ſkin afterwards gives way, and the bleeding is much more conſiderable than in the former. It requires, however, nothing more than the application of common ſtyptics, with proper compreſs and bandage. The bleeding not appearing, in the leaſt, to be critical, ought to be ſuppreſſed as ſoon as may be, and whatever complaint the infant may labour under, be treated according to its kind.

## SORENESS, *or* ULCERATION *of the* NAVEL.

THE care of this part has been ſo uniformly ſubmitted to nurſes, that unleſs ſome very unuſual complaint has appeared, medical men have ſeldom been conſulted. On this account, its diſorders have rarely been mentioned by writers, nor probably have all the affections to which it is liable been known to them.

The ſeparation of the cord is the work of nature, whoſe operations are uſually performed in the beſt manner and time. It may be here remarked, however, that in regard to the time there is a conſiderable variety; a complete ſeparation in ſome inſtances taking place in five days, and even earlier, and in others not till the fifteenth, or ſixteenth. When ſo late, the funis is uſually found hanging for ſome time only by a very ſlender filament, which if perfectly dead, as it uſually is, ought

ought to be divided; nature having herein failed of her intentions. From the neglect of this, a ſource of irritation and diſcharge is kept up, which I have ſuſpected being the cauſe of ſome of the little diſorders now to be noticed. In the laſt inſtance that I met with of a long diſcharge from the navel, I afterwards learned that the funis had been in the above ſtate for ſeveral days, and had not dropped off till the fifteenth.

THE ſeparation of this part, however, is not often followed by much ſoreneſs or pain, though there is frequently a true ulcer of the part. The common applications of a bit of ſinged linen cloth, a toaſted raiſin, and duſting the part with hair-powder, or the powder of ceruſe, are uſually ſufficient for the common ſoreneſs conſequent upon the ſeparation of the cord. In ſome inſtances, however, the diſcharge is very great, and the part continues to appear raw, and indiſpoſed to heal, or dry up. In ſuch caſes, I have often found three or four ſmall

pieces

pieces of a ſoft cabbage leaf one of the beſt applications. They ſhould be laid one over another, that they may be preſerved moiſt and cool, and ſhould be continued as long as the diſcharge ſhall be conſiderable.

A MORE troubleſome caſe is that of the part becoming ſore, often ſome weeks after it has appeared to be healed; and as far as I have ſeen, (unleſs in ſome very bad caſes preſently to be noticed,) has taken place only where the ſkin of the belly has extended an unuſual way on the cord, occaſioning, as will be noticed in a ſubſequent chapter, a diſpoſition to exomphalos. This ſoreneſs is likewiſe attended with much thin diſcharge, which diſappears and returns irregularly, together with a raw appearance of the part; which is not many days in the ſame ſtate. The bowels are in this caſe uſually affected, and ſhould therefore be carefully attended to, and proper remedies adminiſtered according to the nature and number of the ſtools; the part being at the

the ſame time covered with cabbage leaves, or with a poultice of bread and milk, or of aq. litharg. acetati comp. or the decoct. corticis, according as it may be healed, or otherwiſe; or the raw part touched, now and then, with the argentum nitratum, blue vitriol, or pulvis lapid. caliminaris, as its appearance, and the quantity of diſcharge may ſuggeſt.

By one or other of theſe means, I have always found it get well, but ſometimes not in leſs than five or ſix weeks, and then has uſually dried up ſuddenly; until which time the infant has ſeldom thriven properly. In ſeveral recent inſtances, however, I have encloſed the raw part in a ligature; and this method has uſually removed the complaint in a couple of days; and ſeems therefore always to be preferable where it can be effected.

BUT there is a much more alarming ulceration, which like the former, takes place ſome time after the part has been properly healed, and is, probably, always the conſequence of ſome other illneſs, or general

general debility of the infant. In ſuch caſes, the ſore has been found to ſpread over a great part of the belly, and even to mortify. Here very little can be done, I believe; all the inſtances but one, that I have known any thing of, having proved fatal, not ſo much from the local affection, or tender age of the ſubject, as from the original cauſe of the gangrene.

Whatever is found proper in a ſimilar ſtate of parts on other occaſions, ſhould be made trial of, ſuch as fomentations, poultices, and a liberal exhibition of the bark and cordials; under the uſe of which, however, the infant rarely ſurvives long enough to afford a due trial of their effects.

Mr. PEARSON, nevertheleſs, has informed me of two caſes of this kind of ulceration, which took place in children turned of ſix moths old; one of whom recovered, under his care, by the means above recommended, which were had recourſe to as ſoon as the ſore began to ſpread. The other caſe had been attended by another gentle-

gentleman, and was not ſeen by Mr. PEARSON till a ſhort time before the infant died.

## UNKINDLY SEPARATION *of the* FUNIS UMBILICALIS.

THE uncommonneſs of the appearance here intended may be offered as a reaſon for noticing it, as it can require but little if any medical aſſiſtance. I have only once ſeen ſuch a caſe; and being at a loſs what turn it might take, it is imagined, that other practitioners may not be diſpleaſed with this account of the probable reſult.

THIS caſe was hinted at under the title of Hepartomphalos, and the ſubject of it born in the Lying-in-hoſpital; where the funis was tied in the ordinary manner, about three inches from the abdomen. But inſtead of ſeparating cloſe to it as uſual, only the part encloſed by

the ligature decayed; the portion below it preſerving its former appearance, except that it was a little ſhrunk or ſhortened: ſome unuſual veſſel, or vaſa vaſorum, it is probable, keeping up the life of this caducous part. In this ſtate it remained for ſome days before the nurſe made mention of it to any one; and as it afterwards appeared probable it would gradually ſhrink away, no particular directions were given; but it was purpoſed in a few days, to tie the funis cloſe to the belly, if that ſhould not be rendered needleſs by the cord becoming dry, and dropping off in the uſual manner.

When the child was near three weeks old, the funis appeared a little raw and moiſt, and the ligature was then determined upon; but the mother being called to a place as wet-nurſe to a great diſtance, left the hoſpital ſuddenly, the remaining funis being ſtill a living part, but only half an inch in length, and the child very healthy.

## HERNIÆ.

RUPTURES may take place in different parts, but they uſually appear at the navel, or the groin. The exomphalos is ſometimes complicated with the ventral hernia near the part, and is occaſioned by the ſeparation of the recti muſcles, the linea alba being there deficient; but it ſeldom extends far above or below the navel. The ſimple exomphalos is a very common complaint, which if immediately attended to, is eaſily cured, perhaps merely by the uſe of the cold-bath: but if neglected, may prove troubleſome as the child grows up; eſpecially to females. It will be ſooner cured, however, if treated like the hemorrhage of the navel, by adapting a pyramidical compreſs, made of round pieces of good ſticking-plaſter, ſpread upon thin leather, with pieces of card placed between them; or what is more eaſily prepared, and is adapted to

poor people, a piece of bees-wax as broad as a ſhilling, and half an inch thick: the upper part of it may be round, and the other flat, which ſhould be placed on the navel. But if the child be a twelve-month old, theſe remedies will then require a pretty tight bandage round the waſte; and ſuch a compreſſion, I have frequently obſerved nurſes afraid of, who often looſen the bandage ſo much as to render it of very little uſe. On this account, I have for ſeveral years recommended SQUIRE's elaſtic bandage, which if this rupture be complicated with the ventral, becomes the more neceſſary; and ſitting quite hollow on the ſides, and making no kind of compreſſion but on the part affected, and the oppoſite point of the back, perfectly anſwers the end, and generally in three or four months. But for the ſimple exomphalos in young children, I have for ſome years ſucceeded equally well by the ingenious contrivance of Mr. KELSON of *Seven-Oaks*. This conſiſts only in bringing the parts together

gether by means of three or four ſtrips of adheſive plaſter, applied ſtar-wiſe, acroſs the navel, which are to be renewed as occaſion may require.—It has been ſaid, that I have often obſerved ſtartings of the navel happen to ſuch infants, in whom the ſkin of the belly has extended further than is common upon the funis; on which account, nurſes ſhould be directed to be particularly careful in ſuch inſtances, and keep the part more than ordinarily confined.

THE bubonocele is of more conſequence, yet may be ſafely left without a bandage, eſpecially as the cold-bath alone generally cures it when happening to children before they go alone. In early infancy, there is likewiſe ſome difficulty in retaining the truſs on the part, and it is continually liable to be wetted. If a rupture, however, ſhould be very large, and the infant unuſually fretful and crying, recourſe may be had to a ſteel-truſs; to which it will be neceſſary to pay ſome attention, leſt it ſlip out of its place, or

the rupture fall down, and be bruiſed by the pad. After two years of age, indeed, when children begin to take more exerciſe, the uſe of a truſs ſeems to be abſolutely neceſſary, of which thoſe made of ſteel as improved by Mr. SQUIRE, are incomparably the beſt.—Should the cure of either kind of rupture proceed ſlowly, cold-bathing will aſſiſt it, as well as be proper, for ſome months, after leaving off the bandage or truſs.

LASTLY, it may be prudent to drop a word or two on the ſtrangulated hernia; which is more apt to take place in the groin than in any other part, though happily, it is not very common in children. It can be neceſſary to do little more, than to repeat here the obſervation made in the chapter on vomiting; that when any part of the inteſtine is ſtrangulated, the ſtomach will frequently eject every thing that is put into it, and ſhould therefore, furniſh a ſuſpicion of ſuch an accident, and lead to an immediate examination of the parts.

Should.

Should the ſlighteſt appearances of tumour or heat be diſcovered, the experienced ſurgeon will pay a proper attention to it, and can need no directions from this work.—I ſhall only obſerve therefore, that the free application of cold water, or of ice, after the ordinary remedies have failed, has in ſeveral inſtances ſucceeded.

## HYDROCELE.

THIS diſtention of the ſcrotum is of a nature ſimilar to the hydrocele of adults, and when it falls to the ſhare of infants, I believe, uſually appears at the birth. It has been ſometimes miſtaken for a common rupture, and a linen bandage been applied in the ordinary manner. It is, however, eaſily diſtinguiſhed from that complaint, by the tumour being tranſparent; without pain; and from not readily retiring upon preſſure, nor being increaſed by the crying of the infant.

It has been thought always to be a congenite complaint, and that the tumour does not retire upon preſſure, but I think I have lately ſeen ſome inſtances where it has been otherwiſe.* In one I had occaſion to examine the parts very attentively at the birth, on account of a little mal-conformation of another kind, and neither then, nor the next morning ſaw any appearance of hydrocele; nor was it diſcovered by the nurſe or mother till ſix weeks afterwards, though the parts, for the reaſon above mentioned, were frequently examined. About this time I was ſent for in haſte, on account of the appearance of a large hydrocele, which, however, by the mother's report, was before I got there greatly diminiſhed. The ſcrotum, nevertheleſs, contained (as I imagine) near a table ſpoonful of water, and was from this time diſtended in different degrees, as the water happened to

* Mr. *Le Febure de Villebrune* met with it in a child of twenty-two months old.

retire,

retire, more or leſs, through the tunica vaginalis and rings of the muſcles, which I apprehended muſt have been preternaturally open; though no portion of the meſentery, nor inteſtine, I believe, ever deſcended. The complaint, however, diſappeared in a few weeks, by only daſhing the parts with cold water, three or four times a day.—This infant was a twin; and it is remarkable, that the other child had likewiſe a hydrocele, which was not diſcovered for three weeks after the former; but was much ſmaller, and got well by only the like gentle treatment.

THE hydrocele is a harmleſs complaint, and would probably always diſappear of itſelf in the courſe of a few months; but may much ſooner be diſperſed by ſome aſtringent lotion. The aq. ammon. acetatæ has ſucceeded with me perfectly well, and I have ſometimes made uſe of compreſſes wetted in vinegar and water, with the addition of a little ſpirit, as the ſkin has been able to bear it. Perhaps

the

the addition of crude Sal ammoniacus, as adviſed by Mr. KEATE, in the treatment of adults, might aſſiſt the abſorption of the water; but I have myſelf never had occaſion to make trial of it. The ſmoke of burning gum benjamin received upon flannel, and applied to the part, is likewiſe a good remedy. But the ſpeedieſt method is to puncture the bottom of the tumour with the point of a lancet; which, as it may always be done with perfect ſafety, and with very little, and only a momentary pain to the child, is often preferred by the mother, as it inſtantly removes a blemiſh which cannot but be unpleaſant to her, whenever any other perſon may chance to be witneſs to it. In whatever way the water be gotten rid of, I never knew it return, nor the child ſuffer any conſequent inconvenience; though the complaint is ſo common that I have ſeen it in many ſcore inſtances, and cured in different ways.

## PNEUMATOCELE.

HAVING never ſeen the complaint, and conceiving that the preceding diſorder has often been miſtaken for it, I ſhould not have noticed it, but in the view that nothing relating to infantile complaints might be overlooked. Should the ſcrotum, however, be really diſtended with wind, a piece of cotton, fumigated with gum maſtic may be applied twice a day, and the part embrocated with the compound water of acetated litharge and camphorated ſpirit, and be ſupported with a proper bandage.

## RETENTION *of the* TESTES.

ONE, or both of the teſticles, in ſome inſtances, remain in the abdomen of infants

fants at their birth, and then a tumour appears in one, or both groins, forming another affection reſembling the hernia, and is noticed on that account. As the application of a ſteel-truſs, or, indeed, any other bandage, might here be attended with bad, if not fatal conſequences, it is of importance to avoid the miſtake.

This complaint being generally owing to a preternatural ſtricture of the rings of the abdominal muſcles, or to a want of due action in the cremaſter or gubernaculum; I have nothing to recommend, unleſs it be in a negative way, to forbid any rude handling of the part, in order to force the teſticles into the ſcrotum. If any thing of this kind ſhould be judged neceſſary, from a diſpoſition of the parts to give way, the deſcent ſhould be only very cautiouſly aſſiſted, and that not frequently. In the courſe of a few weeks, or months, however, the obſtacle, of whatever kind, uſually gives way; though ſometimes, indeed, the part remains confined through life, and its unnatural po-

ſition

ſition is certainly attended with ſome inconveniences, and a greater chance of injury to the teſtes; of which I have ſeen more than one inſtance in adults. Should inflammation take place, in conſequence of any accident, during infancy, every proper means of counteracting it ſhould be immediately had recourſe to, ſuch as gentle laxative medicines, and ſedative embrocations and cooling poultices, made of the compound water of acetated litharge.

## TUMEFACTION *of the* PREPUCE.

THIS little complaint, like the hydrocele, ariſes from extravaſated water, and is a partial anaſarca, and if it be not attended with inflammation, nor owing to a ſtone ſticking in the paſſage, as it ſometimes is, it never proves of any conſequence. It is ſometimes preceded by a copious diſcharge from the part, of a thick

thick but ſoft conſiſtence, reſembling a ſtrong lather of ſoap, or the froth of milk, which diſappears as ſoon as the tumefaction ſubſides.

THE part may be waſhed frequently with the aq. litharg. acetati comp. or be wrapped up in a poultice of that kind, and the body be kept open, which uſually removes the complaint in two or three days; but if it ſhould not, the part may be lightly ſcarified, and afterwards fomented. Should it ariſe from inflammation, as in the eryſipelas infantile, the inflammatory cauſe muſt be properly treated. If from a ſtone in the paſſage, the ſtone muſt be extracted, if within reach, or if otherwiſe, it ſhould be forced back into the bladder.

## PROLAPSUS, *or* PROCIDENTIA ANI.

THIS is a deſcent of the internal coat of the lower bowel, (this coat, it is well known,

known, being much longer than the others, and full of folds); and is either owing to its laxity, or to irritation. It is no uncommon complaint, nor uſually difficult of cure, being generally a ſymptom of ſome other; ſuch as worms, or other foulneſs of the bowels, or has been induced by rough purges, diarrhœa, long coſtiveneſs, a ſtone in the bladder, or other irritating cauſe, and is uſually preceded by teneſmus: to each of which the proper remedy muſt be applied, or the cure of prolapſus will be attempted in vain.

BUT if the complaint ſhould remain, after the irritating cauſe has been removed, it will then depend merely upon a relaxation of the part, ariſing from the long habit of deſcending every time the child has gone to ſtool; and is, in general, eaſily cured by an aſtringent lotion. To this end, a compreſs of lint, or ſoft tow, wrung out of the dregs of red wine, to which may be added a few drops of the aq. litharg. acetati ſhould be often applied,

plied, and ſecured by a linen bandage, ſo as to make a firm compreſſion on the part; or a compreſs may be ſprinkled with fine powder of myrrh, frankincenſe, and dragon's blood, or impregnated with the ſmoke of turpentine caſt on burning coals. Or, ſuppoſitories may be made of powder of balauſtines, red roſe leaves, and oak-bark, in honey, and introduced into the bowel, after going to ſtool.—It may be found expedient to have the part ſupported at ſuch times, by a ſervant placing a finger on each ſide the gut: but this caution will not be neceſſary unleſs the complaint has been of long ſtanding, or the deſcent be conſiderable.

When this is the caſe, aſtringent fomentations and injections will alſo be expedient. Theſe may be made of a decoction of the cortex querci, which muſt ſometimes be rendered more powerful by the addition of alum, the quantity of which ſhould be increaſed as the part may be able to bear it.

SHOULD

SHOULD ſuch a caſe occur in children, as it frequently does in adults, in which the bowel may not be eaſily returned, on account of ſupervening tumour and inflammation, the ſtricture will never fail to yield to an injection of cold water with a few drops of the aq. lithargyri acetati, with five or ten of the tinct. opii. An hour or two after ſuch an injection has been thrown up, the prolapſed inteſtine, though perfectly black as well as ſwollen, will be found to retire of itſelf; the ſedative quality of the injection removing the ſpaſm and ſtricture, which afforded the only impediment to the reaſcent of the bowel.

CHILDREN affected with this complaint ſhould always ſit on a hard, flat-bottomed ſtool, or a chair without arms, and of ſuch a height that their feet may not touch the ground.—For children of eight or ten years old, who take much exerciſe, recourſe may be had to Mr. GOOCH's ſuſpenſory as improved by Mr. SAVIGNY, in-

ſtead of the linen bandage above recommended.

## DISCHARGES *from the* VAGINA.

THESE are either ſanguineous, mucous, or purulent.—As I ſpeak profeſſedly only of appearances before the age of puberty, I have merely to remark on the firſt, that infants have ſometimes ſuch a diſcharge from the vagina a few days after birth, and, that the like happens to girls of eight or ten years old; but neither appears to be of any conſequence. Should, it however, on any account, be thought neceſſary to preſcribe ſomething, a little teſtaceous powder, or magneſia, according to the ſtate of the bowels, will be ſufficient, as the diſcharge always diſappears in a few days.

CHILDREN of five or ſix years old, are ſubject to a mucous gonorrhœa, reſembling the genuine fluor albus of adults, which will in ſome inſtances be in an exceſſive

exceſſive quantity, ſo as to run through all their clothes; and is ſometimes, though rarely, tinged with blood. If it were ſuffered to continue, it would probably injure the health, but I believe may always be cured, by one or other of the means recommended for the next, which may be called purulent gonorrhœa.

THIS is alſo no uncommon complaint even in children of two or three years old, and is then, in general, eaſily removed by a little cooling phyſic, and keeping the parts perfectly clean. I have ſometimes made uſe of a lotion of the aq. litharg. acet. comp. which I believe is preferable to moſt others, if had recourſe to in the commencement of the complaint; and if there be any excoriations, they ſhould be covered with the unguent. ceruſſæ acetatæ, ſpread upon linen, or lint. Inſtances will now and then occur in this ſpecies alſo, in which the quantity of diſcharge will be exceedingly great, ſo as to run down the child's limbs, ſeveral times in the day; and will laſt for two or three

weeks: but it has always diſappeared in that time, and not uncommonly, where it has been the moſt copious, ceaſes almoſt ſuddenly.

WHEN the purulent diſcharge makes its appearance much later, as it not unfrequently does, and is much diſcoloured, and fetid, it gives riſe to a ſuſpicion which young practitioners cannot be too guarded againſt. There are, indeed, inſtances of little girls, not more than ſix years old, being injured; and it is of conſequence to make a judicious diſcrimination: but there are on the other hand, inſtances of a very ſuſpicious appearance, as late as the age of thirteen or fourteen, where no injury could be received without the conſent of the party, who is generally perfectly innocent, and where, therefore, the leaſt ſuſpicion would be very diſtreſſing to her, and might make a whole family miſerable.*

DIS-

* Induced by motives of humanity, I hope I may be permitted to add a word or two more on this ſubject; ſince

DISCHARGES with the worſt appearances are frequently carried off in eight or ten days, merely by the treatment above recommended; but I have ſeen ſome caſes in the youngeſt ſubjects, of a bad habit of body, where mercury, as a deobſtruent, has proved uſeful, though I could not have the leaſt ſuſpicion of a venereal taint. In ſuch caſes, I have found WARD's white

ſince the prudence and information of practitioners may not only prevent a vaſt deal of unneceſſary diſtreſs to many worthy families, but may even ſave the character, or life of another party ſuſpected of criminality. For, beſides many inſtances wherein inattention or ignorance might give riſe to injurious ſuſpicions, there are caſes which call both for great attention and experience, in order to form a juſt and decided opinion. I have, indeed, known the diſcharge to be ſo ill-coloured and fetid, and attended not only with great pain and inflammation, and excoriation in different parts, but ſuch tumour and other appearances of violence offered, about the furca, and in other inſtances, with an abſceſs in the labia; that had the patient herſelf advanced any charge, I fear, I ſhould not have heſitated to have joined in with it; and yet from the event, as well as the whole hiſtory of ſeveral caſes, it has been very evident, that no kind of injury had been received.

drop a more convenient medicine than any other prepartion of mercury: it may be given in the doſe of half a drop, and by degrees, be increaſed to two and even three drops, once or twice a day, for two or three weeks. But where this has failed, I have only to add, that I have been always able to ſucceed by giving the decoctum corticis, cum balſam. copaibæ, ovi vitel. ſolutum; which is alſo an admirable medicine in the fluor albus of adults.

## *On the* VENOM *of* INSECTS, *and of* CERTAIN ANIMALS.

THOUGH the following accidents, like ſome others before mentioned, are not confined to any age, they are, at leaſt, more formidable when they fall to the lot of little children. On this account, it may not be improper to recommend ſuitable antidotes againſt the bite, or ſting of venomous

venomous inſects, particularly the waſp, gnat, and other flies. Indeed, for the moſt venomous, ſuch help can rarely be had before conſiderable inflammation has taken place; after which it will take its courſe, and will continue, if occaſioned by a gnat, three days, and by ſome other inſects, for ſix; though the tormenting itching may be allayed much ſooner by the means of proper applications. If the bite ſhould be on the eye-lid, the inſide of the lip, or ear, very troubleſome ſymptoms may follow, and the infant will be vexed by it exceedingly.

IN the abſence of better remedies, the firſt application may be, of the ſtrongeſt ſpirit at hand, three parts, two of vinegar, and one of ſweet-oil; taking care it do not get into the eyes. But as ſoon as may be, the following ſhould be applied very frequently; which will check the progreſs of the venom, and allay the pain and itching immediately.

℞. Spir. camphorati, ℥ ß.
Aceti diſtil.
Tinct. opii āa ʒj
Miſceantur;

to which, if the injury be not too near the mouth, may be added twenty drops of the water of acetated litharge.

The bite of the common bug which infeſts crouded places, not only occaſions a tormenting itching in children of a very delicate ſkin, and in certain grown people newly come from open villages, but will alſo ſometimes raiſe bliſters as large as pigeons eggs, and will inflame the parts for ſeveral days. A very good application is vinegar with a ſmall quantity of olive-oil, and a few drops of laudanum: oil alone would rather increaſe the ſize of the bliſters. But the beſt application, I believe, for the ſting of any of the above mentioned inſects where the inflammation extends far, is ice, which immediately takes off the heat and itching; and ſhould be repeated for half an hour at a time, every

every three or four hours, as long as may be neceſſary.

THE ſting of ſome inſects has ſometimes been found to penetrate one, or more of the abſorbent veſſels, and has then produced an appearance that would have been very alarming if ſuch inſects could convey a truly morbid poiſon. I have ſeen large branches of lymphatics, very tumid and inflamed, running from the knuckles to the axilla, producing an almoſt intolerable itching and burning, until the laſt mentioned remedy has been applied; which has preſently abated theſe troubleſome ſymptoms, and carried off the hardneſs and inflammation by the next day.—For the highly venomous bite of the viper, the immediate application of olive-oil is the well-known, and certain remedy; as well as the internal exhibition of the volatile alcali.

UNDER the painful impreſſions of an awful accident that happened in my own family, ſome years ago, at the time I was engaged in this part of the work, (though, I thank

I thank God, the alarm terminated happily), I cannot avoid dropping a few words on the envenomed bite of *morbidly* ENRAGED ANIMALS.* It is not my intention, however, to advert to the peculiar nature of this moſt malignant poiſon, nor to enumerate the many deceitful remedies that have been at different times propoſed with an air of infallibility, whoſe ineffi-cacy is well known.† Nor is it my deſign to propoſe any new remedy, but rather to lament, that the beſt preventives ſhould be ſo ill attended to, particularly amongſt the inferior claſs of people, to whom this dreadful accident happens oftener than to the rich. And on this account, as well as the ſubject being rarely

* The diſeaſe among *Dogs*, has been known, it is ſaid, about 2050 years.

† In regard to dipping, or rather, half-drowning in the ſea, I ſhall juſt remark, that I ſhould have more hope of its efficacy upon the firſt approaches of the hydrophobia, than as a preventive very ſoon after the bite.

treated

treated of, it is hoped, the intention will apologize for obtruding a friendly caution in this place. For, after a good deal of experience, and much inquiry and reading on this ſubject, I am confident, that nothing ought, in any inſtance, to be depended upon, but taking out the injured parts, by the knife or cauſtic, or both; which if duly and timely effected, cannot fail to prevent every evil apprehended.* But whenever the ſituation of the wound may not admit of going deep enough to inſure ſucceſs, or too much time may already have elapſed, the ſtronger mercurial ointment ought to be rubbed in very freely, ſo as to raiſe a ſalivation; which has not only been thought to have

* Since former editions of this work, this opinion is further confirmed by the caſes of Mr. JESSE FOOT, publiſhed in Dr. SIMMONS's Medical Facts and Obſervations; in which we ſee the different ſucceſs attending excifion of the parts, and various other highly extolled remedies, even in ſubjects bitten by the ſame animal. A remarkable caſe is alſo given in the 4th vol. of the Memoirs of the Medical Society of *London*, by Dr. JAMES SIMS.

proved

proved an effectual prophylactic, but to have alſo ſucceeded even where evident ſymptoms of infection had taken place:* though ſuch teſtimony, I am ſorry to add, is much weakened by many later experiments.

FOR the ſake of ſuch readers as may not have opportunity for reading many different publications, it may not be ſuperfluous to ſubjoin the judicious directions of the faculty in *Paris*, ſubmitted to the Committee of public inſtruction, which will bring the whole of the indications into view.

Let the wound and the ſurrounding parts be well waſhed with lukewarm water, to take off the ſlaver as much as poſſible.

Let the wounded fleſh be then inſtantly cut out with a ſharp inſtrument, or cauteriſed with hot iron, or with ſpirit of nitre,

* See *Hiſtoire et Memoires de la Societè royale de Medecine Année* 1783. 2de *partie*.—TISSOT. Dr. LAYARD, &c.

or

or vitriol, commonly known by the name of aqua fortis, and oil of vitriol.*

Suppuration will be accelerated, and pain alleviated, by filling and covering the wound with a poultice of bread and milk applied lukewarm, and renewed every four hours.

Let the ſurrounding parts be then rubbed with ſtrong mercurial ointment. If the danger be imminent, and the bites deep, or numerous, ſalivation ſhould be excited as ſoon as poſſible. It is alſo neceſſary in this extremity, to cut away, burn, or cauterize the fleſh around the wound, even although it ſhould appear

* Dr. *Hamilton's* experience confirms the efficacy of exciſion in numerous inſtances, when done even as late as the fifth and ſixth day after the bite; and in ſome inſtances after re-inflammation of the bitten parts, and commencement of the ſymptoms. He alſo prefers an exciſion of the parts, as more certain than the cauſtic, unleſs the kali purum is made uſe of, which forming an immediate eſchar to ſome depth, the eſchar may be removed by a ſpatula, and the cauſtic be repeated immediately, as often as may be judged neceſſary.

to be healed up. It is certain, that the wound opens, when the hydrophobia makes its appearance.

IN a work calculated, for as extenſive uſefulneſs as the writer's reſources may ſupply, it can ſcarcely be judged improper to add to all that I have ſaid, the pertinent obſervations found in Dr. HAMILTON'S laſt edition on this melancholy diſorder, as guards, or preventives of injury.

THE following ſymptoms, he tells us, may be noticed in dogs about to become rabid:

1ſt. A diſinclination to food.

2d. A marked melancholy.

3d. The eyes appearing mixed and dull.

Theſe ſymptoms, he ſays, mark the firſt ſtage; yet with ſcarcely any thing pathognomonic. But, it is added, that the animal now occaſionally forgets his maſter, and is irregularly peeviſh; and it becomes at this time highly proper to regard our ſafety, and not to truſt him if he ſnarls, nor to careſs him.

The

The ſecond ſtage is more diſtinctly marked; the dog does not feed with avidity, though he does not refuſe either his victuals, or drink; the latter in no ſtage offending him as it does man under this diſeaſe. But he ſhuns other dogs, and is equally ſhunned by them. A convexity may likewiſe be diſcovered in his back, formed by drawing his hinder towards his forelegs; and an extreme dryneſs of his noſe.

In the laſt ſtage he loſes all recollection, quits his maſter's houſe, runs forward any where, and ruſhes, without barking, at every animal coming in his way; but turns not aſide to bite any; and within the ſpace of two days after dies convulſed. If he be tied up, he bites at his chain in this ſtage, and is furious if approached.

I HAVE only to add, (what it is, indeed, a great ſatisfaction to be able to ſay,) that, dreadful as this accident is where the poiſon has taken effect, it is evident, that only a very ſmall proportion of thoſe who are bitten by animals actually enraged,

raged, becomes really infected.* Fortunately, the clothes ſometimes prove a defence, by wiping off the foam from the animals teeth; at others, it does not happen to be forced into the wound, or is not yet poſſeſſed of a poiſonous quality; or laſtly, it is not abſorbed, or the ſyſtem may not be in a ſtate to be infected. Theſe aſſertions are ſupported by numberleſs facts, though much leſs frequent, perhaps, in *London* than in ſome other parts, eſpecially in the vicinity of large foreſts on the Continent, where ſuch animals are very commonly met with, and often wound great numbers of people.

It is, doubtleſs, the uncertainty of the bad conſequences of ſuch injuries, that has ſupported the credit of many fallacious remedies on this melancholy occaſion. Encouraging, therefore, as the above circumſtances certainly are, it would, indeed, be madneſs to confide in them, where the proper remedy may be made

* *Dr. Hamilton* ſays, not one in ſixteen.

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uſe of in time; and though I ſhould wiſh to conceal rather than ſpread theſe acknowledged facts, could I think they would have ſuch an effect,* it is on the other hand, no ſmall ſatisfaction, that ſuch encouragement may be juſtly held out to thoſe who may be under any alarm for themſelves or their friends.

## Disorders
### *Recorded under obſolete Terms by* Ancient Writers.

I should here cloſe the account of Diſeaſes, did I not meet with ſeveral others recorded by the ancients, which it may therefore be proper to take ſome notice of. They appear in the works of *Rhazes*, *Paulus*, *Œtius*, *Fabricius ab Aquapendente*, *Celſus*, *Primeroſe*, and a few leſs ancient

* Indeed, a late, and well-known, melancholy inſtance of *rabies canina*, in a medical gentleman, and the uncertainty of the more ordinary means, might ſufficiently caution every one from neglecting any ſuſpicious caſe, or truſting to inadequate remedies.

writers. Of ſome of the diſeaſes there mentioned, I know nothing but from the authors own account of them, or that they are needleſs diſtinctions of diſeaſes (already ſufficiently noticed) which the ancients were very fond of making, eſpecially in complaints of the ſkin; but can anſwer no practical end: of the others a more particular account will be given. Among the diſeaſes recorded by theſe writers are, *Lentes*, *Hiſpiditas*, *Achores*, *Favus*, *Pſorophthalmia*, *Impetigo*, *Ranulæ* or *Batrachos*, *Seriaſis*, *Pariſthmia*, *Parulis*, *Inflatio*, *Crinones*, *Malum Pilare*, *Phthiriaſis*, *Hydroa*, *Macies*.

The firſt ſix are affections of the ſkin, or of the eye-lids. *Achores* and *Favus* are a ſort of Cruſta-lactea, ſo called by ſome, when of a dark colour, or ulcerated, and extending to the head, and *Impetigo* when it attacks the chin; but by others the term *Achores* is applied only to adults. The Scald-head alſo, denominated *Tinea* when the ſcabs have reſembled moth-holes in cloth, and *Favus* when like a honey-comb, has been by ſome termed *Achores*, when

when the diſcharge has been unuſually acrimonious. *Pſorophthalmia* is confined to the eye-lids, and is ſo named by ÆTIUS, and others after him.

RANULA is ſaid to be an inflammatory tumour of the parts under the tongue, and according to the ancients, particularly of the veins: it ſometimes ulcerates, but often preſents a ſpecies of ſoft and lax œdema. CELSUS ſays the tumour is ſometimes incloſed in a cyſt, which muſt be taken out; the operation for which is fully deſcribed by AQUAPENDENTE. Although ſuch ſeemingly different accounts are given of this complaint, the *Ranula* appears to be no more than an infarction of the ſublingual glands, and I believe, is not very common either in infants, or adults; and indeed is moſtly an endemic complaint. I have ſeen it, however, in this country, in both; and at this time am attending an infant in whom it roſe very ſuddenly, and after increaſing greatly for two months, and continuing very hard, is at this moment becoming ſoft

and looſe, and is conſiderably diminiſhed in its ſize. I have ſeen it in an adult bigger than the largeſt walnut, and was then very troubleſome, both in ſpeaking and deglutition. When of ſuch a ſize, it is uſually ſoft, and contains a fluid, and ſometimes calcareous concretions, owing to an obſtruction of the ſalivary ducts. In this caſe, it needs only to be opened, and to be cleared of all the concretions; but if it be hard, the whole tumour muſt be extirpated. TULPIUS relates a caſe in which the matter adhered ſo firmly, that the ſurgeon, after having laid open the cyſt, was obliged to have recourſe to the actual cautery to deſtroy the inſpiſſated juice. *Seriaſis*, from σιρος, *quia caput quaſi excavatum cernitur*; the bones about the fontanelle, or ſometimes the membrane only, being depreſſed, or drawn in. PAULUS (*Lib.* i.) deſcribes it as an inflammation about the cerebrum, in which the brain is ſaid often-times to mortify within three days; but if it ſhould not, the child, it is ſaid,

will

will recover * I have never met with any thing like this diſorder accompanied with a depreſſion of the ſkull, though I have ſeen the preciſe depreſſion unaccompanied with any diſeaſe, and ſomething very like the diſeaſe without the depreſſion. The latter was noticed in an infant of five weeks old, who died of convulſion fits, the brain appearing as if in a ſtate of mortification, and ſmelling exceedingly fetid. *Pariſthmia* is an inflammation of the tonſils, or throat, but is certainly not common in this country; it is hinted by HIPPOCRATES in his book *de Dentitione*. *Parulis* is a complaint deſcribed by PAULUS as a painful tumour about the gums; RHAZES calls it a bliſter in the mouth. *Inflatio* is a diſtention of the ſkin from wind or water after a child has been reduced by long illneſs. *Crinones*, or *Grubs*, is little known as a diſeaſe, I believe, in

* Perhaps *Hippocrates* may allude to this diſeaſe, *Aph.* 50. ſect. 7. "Quibus cerebrum ſideratum eſt, intra tres dies interiunt, ſi vero hos ſuperaverint, ſani fiunt.

*Europe.* It is a ſecretion from the ſebaceous glands, and appears on the arms, legs, and back, of ſucking children; and is abſurdly enough thought by ſome to be produced by inſects:* older children are often found to have ſome appearances of it, but it ſeldom affords them further trouble than a little itching, and they amuſe themſelves by forcing out of the ſkin what they call worms.—In the inſtance of infants ſo affected, rubbing the parts with a coarſe cloth, by the fire-ſide, is all that will uſually be neceſſary in northern climates.

THOUGH this kind of affection is generally of little conſequence, whether in infants, or young children, I have nevertheleſs, ſometimes known it prove a very troubleſome complaint in older ſubjects, eſpecially in females about the time of puberty. In ſuch inſtances, the whole neck, back, and breaſt, will be covered with little black ſpots, which gradually

* ASTRUC. LIEUTARD. PEACHY.

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inflame till the parts become totally covered with heated pimples. Theſe at firſt itch intolerably, ſo as frequently to keep the patient from ſleep through the greater part of the night; and in conſequence of being continually rubbed, turn to little inflamed and angry boils. When ſome of theſe have diſcharged the ſebaceous matter, and are healed up, others will ariſe, in ſucceſſion; and at the end of ſeveral months, the ſuperior parts of the body are covered with them.

After making trial of common purges and alteratives, to no laſting advantage, I have cured the complaint by waſhing the parts morning and evening, for a few days, with the lotio ſaponacea, and afterwards rubbing in a little unguentum hydrargyri nitrati; and when the ſoreneſs has gone off, making uſe of a proper fleſh-bruſh, for two or three months. The patient may at the ſame time take fifteen or twenty drops of the aqua kali pp$^{t}$. two or three times a day, in a cup of ſaſſafras-tea, or milk and water.

A COMPLAINT ſometimes confounded with the former, is that called *Morbum pilare*, and is ſuppoſed to be ſpoken of by HILDANUS as ſadly tormenting one of his own children. It is alſo mentioned by PAREY; but I have never met with it myſelf. It is ſaid to be owing to hairs not duly expelled, which ſtick in the ſkin, eſpecially in the back of young infants, whom it torments by an inceſſant itching, and ſometimes raiſes ſmall tumours. The cure is ſaid to conſiſt in fomenting the parts, and then pulling out the hairs with a pair of nippers.

*Phthiriaſis*, or *Morbus pediculoſus* is a complaint I ſhould not have mentioned, were it not ſometimes found very troubleſome, and the heads even of children who are kept the moſt cleanly, much peſtered with theſe ugly vermin. It is not therefore intended to treat of it as a diſeaſe in other parts, (which are ſometimes equally occupied by them) and will be quite ſufficient to ſay, that the cure is, in general, very ſimple, and requires only

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the hair to be ſprinkled for a few days with the powder of ſtaves-acre; a remedy that is kept a ſecret by ſome foreign perfumers, who ſell it at a great price. Should this be ineffectual, a very ſmall quantity of the calx hydrargyri alba may be joined with it. Some people have ſtrongly recommended an ointment made of parſley-ſeeds boiled in freſh butter, which is to be well rubbed into the hair for three or four days.

*Hydroa*, or *Sudamina*, is a trifling eruption from the ſudorific glands. *Macies*, or according to ſome, *atrophia lactentium*, is applied to a decay, ſaid to ariſe either from worms, (and is then called *atrophia verminoſa*)* or to the unſuitableneſs of the breaſt-milk, which though it may be good in its kind, will not prove alike nouriſhing to all children. The milk is then properly directed to be changed, upon which it is remarked, the child will often recover, as I ſhall have

* See HARRIS.

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occaſion to notice more at large, in the *third* volume, on the *management of children*. This diſorder is, however, a true atrophy, or maraſmus, from whatever cauſe; and into which an infant may fall in conſequence of almoſt any of the complaints treated of in the foregoing pages, when they may happen to prove of very long continuance.

I HAVE now gone through all that have been uſually ranked amongſt the diſorders of infants, and have taken ſufficient notice, as I apprehend, of every complaint worth mentioning, that I have met with either in my reading or practice; and may flatter myſelf this tract will be found to poſſeſs the advantage of completeneſs above every work of the kind. That nothing may be over-looked, it remains to take notice of ſome *congenite diſorders*, and external blemiſhes; and firſt of thoſe about the Head.

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## ENCEPHALOCELE, *or* HERNIA *of the* BRAIN.

MANY infants come into the world with various parts imperfectly formed, especially about the head; and never more commonly than in the upper part of the skull. If the deficiency be very great, and accompanied with a like want of brain, such fetuses fall under the class of Monsters, and being never born alive, are not subjects of this work.

THE Hernia of the brain, on the other hand, is met with in infants otherwise completely formed, and is generally curable. The public is indebted to *Monf. Ferrand* for an accurate description of this complaint, given in the 5th volume of the *Memoires de L'Acadèmie royale de Chirurgie.*

THE Encephalocele is a soft circumscribed tumour, usually of a round form, and correspondent in size with the extent of the

the deficiency of cranium; to which the complaint is owing. It is without fluctuation, or diſcolouration of the ſkin, but is attended with a perceptible pulſation of the brain, which ſynchronizes with the pulſe. The tumour retires and diſappears upon preſſure, and is always ſituate either on one of the fontanelles, or in the courſe of one of the ſutures, and is never larger than a pullet's egg. Where the defect in oſſification is very conſiderable, a much larger portion of brain is conſequently protruded, which ſtrictly ſpeaking, it were leſs proper to call a diſeaſe, than a fatal mal-formation, as it is pertinently remarked by *Monſ. Ferrand;* and no more reſembles the true encephalocele, than an eventration reſembles the common inteſtinal hernia. It will be very neceſſary, however, carefully to diſtinguiſh this incurable evil from other ſoft tumours of the ſcalp, preſently to be noted, which it very much reſembles; the latter having frequently the like preciſe feel of a bony margin around them,

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as is common, indeed, in caſes of extravaſation upon any ſolid ſurface. The tumour is alſo colourleſs, and often as large as in the fatal mal-formation, but has a conſiderable fluctuation, and is further diſtinguiſhable by the tumour not retiring upon preſſure, nor being attended with any pulſation.

THE ENCEPHALOCELE is, indeed, eaſily diſtinguiſhed from them both, by the brief deſcription above given of it; and fatal as it would be were it left to itſelf, requires only to be properly underſtood, in order to adapt a rational and effectual remedy, which conſiſts only in a careful and due compreſſion of the part. This may be effected by the application of a piece of ſheet-lead, ſomewhat larger than the tumour, and pierced with holes, that it may be ſewed to the child's cap. The compreſſion ſhould at firſt be very moderate, and never ſo great as to give the infant pain, nor diſturb any of the natural functions; though it ſhould be gradually increaſed as the tumour ſhall retire.

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This is all that is required from art, the cure being the buſineſs of nature, which if the child continue healthy, will proceed in the work of oſſification, and in due time fill up the vacancy in the ſkull. The protruſion of the brain was before an obſtacle to this proceſs; whilſt the injury that tender organ muſt ſuſtain by the preſſure from the ſides of the bone, expoſed it to all the evils which compreſſion never fails to produce, and which it were needleſs to enumerate in this place.

## TUMOURS *of the* SCALP.

THERE are other tumours on the head of new-born infants, which it were improper entirely to paſs over. The one I ſhall firſt mention is of the leaſt importance of any, being occaſioned merely by long compreſſion in the birth. It is of different ſizes, and the ſkin is always diſcoloured; but in any caſe can ſeldom require

quire much attention, as it frequently diſappears in a few hours. If large, it is common to bathe, or foment ſuch tumours with red wine, or with brandy, or vinegar, diluted with water; and in general they gradually ſubſide, though ſometimes not perfectly for ſeveral days. Some of them, however, are of more conſequence, and concerning the treatment of which practitioners have differed; the abſolute impropriety of opening any tumours ariſing from compreſſion having been conceived of by many. On the other hand, I believe, it may in ſome caſes be really neceſſary, in order to prevent a troubleſome fungous ſore, and even a caries of the ſkull. The diſcrimination, however, is ſufficiently obvious, ſuch aſſiſtance being required only where the above remedies and compreſſion have had no effect, and the tumour is found ſenſibly to increaſe day after day, which in ſome inſtances has been the caſe to the end of the month. Such growth is always owing to the extremities of the arteries ruptured by long compreſſion, being

ing ſtill open, and pouring out an ichorous fluid into the cellular membrane, and thereby keeping up, and increaſing the original tumour.

UPON opening the integuments, a bloody fluid is let out, and the tumour nearly ſubſides, which afterwards requires nothing but moderately aſtringent applications and preſſure, which ſhould be continued for a little time after the aperture is cloſed.

ANOTHER kind of tumour, of a more unfavourable appearance, was hinted at under the article of Encephalocele, and of which it may be proper in this place to take a little further notice. Theſe tumours contain a kind of ſerum, and are often very large, but without that diſcolouration of the ſcalp and bruiſed appearance, which there conſtantly is in thoſe laſt deſcribed, nor do they, indeed, ſeem to ariſe from compreſſion; I have, at leaſt, ſeen them extending over a third part of the head, and raiſed an inch or more from the ſkull, after the ſhorteſt and moſt eaſy labours. To the deſcription before

before given of them it may be added, that this kind of tumour, I believe, will always ſubſide very kindly, though ſometimes not completely, until the end of the month. In ſome inſtances, it begins to leſſen in ſix or eight days after birth, but in others, not till near the end of the third week, and, then ſubſides very rapidly; and as it falls, more and more of the ſkull may be felt, from day to day, in proportion as the abſorption of the fluid takes place. To aſſiſt nature, therefore, in this operation, embrocations of acetum diſtil. ſal ammon. crud. and ſpirit camphoratus, ſhould be made uſe of, with a gentle compreſſion of the part; as well as keeping the bowels properly open.

## LYMPHATIC TUMOURS *on the* HEAD *and* SPINE.

THERE is another kind of tumour appearing ſometimes on the head, and at others, on ſome part of the ſpine, which

is not owing to accidents in the birth, but is of a morbid nature. Theſe tumours contain a lymph, and are attended with evident fluctuation, as may be diſcerned by the touch; and unleſs they are exceedingly ſmall, ought in no caſe, I believe, to be punctured, or even removed by ligature, though adhering only by a ſmall pedicle. Thoſe on the ſpine of the neck, or back, or on the loins, if they do not ariſe from the dura mater incloſing the medulla ſpinalis, ſeem to originate at leaſt from the perioſteum of the ſpine; and the iſſue having a morbid ſource, will be kept up after the tumours are opened, or even totally extirpated, and preventing the ſore from healing, the infant ſinks under the diſcharge, or dies in convulſions.

But there are other tumours of a ſimilar appearance, which being, nevertheleſs, of a different kind, may be ſometimes ſafely extirpated, and will be noticed below after the Spina Byfida, to which likewiſe they bear a conſiderable reſemblance.

IMPERFECT

## IMPERFECT CLOSURE *of the* FORAMEN OVALE, *and* CANALIS ARTERIOSUS; *with other* PRÆTERNATURAL CONFORMATIONS *of the* HEART.

THE ſubjects of theſe affections have been termed pueres cæruleati; but the affection itſelf might more properly lead to a name, and be termed cutis cæruleata; though neither would deſcribe at all the nature of the diſorder.

Dr. SANDEFORT, Mr. ABERNETHY, and more lately Dr. NEVIN of *Glaſgow*, have given inſtances of it, which accord with thoſe before offered to the public, by other writers.

Theſe morbid deviations appearing in different parts,* have in all the ſame tendency, viz. in a greater or leſs degree,

* See *Mortgagni, Epiſt.* 17. *Art.* 12. *Lond. Med. Journal, page* 4. and *Med. Obſerv. & Inq. vol.* vi.

to obſtruct the paſſage of the blood through the lungs, which in ſome inſtances has continued nearly the ſame as in the unborn-fetus. The peculiarity, is ſometimes in the pulmonary artery, which is conſtricted, or cloſed, as it riſes from the right ventricle; at others, in the ſeptum cordis, which has an unnatural opening, affording a free communication between the two ventricles; ſometimes in the aorta ariſing equally from the anteriour and poſteriour ventricles; and ſometimes in the imperfect cloſure of the foramen ovale, or the canalis arterioſus.

Theſe ſources of diſeaſe are mentioned merely with a view of pointing out the ſymptoms by which they may be known, and not of attempting a remedy; which is out of our power. The recital, however, may ſerve to prevent fruitleſs attempts, and perhaps the aggravation of the ſymptoms, and conſequent diſtreſs of the patient, where upon due knowledge of the diſeaſe, art has, evidently, nothing to offer. The imperfections are owing entirely

to

to an original mal-formation of parts, or to a deficiency in the powers of the ſyſtem ſoon after birth; the only time in which that diverſion to the circulation can take place, which nature has intended upon the change made in conſequence of reſpiration.

THE preciſe time when this new mode of circulation ſhould take place, is not attempted to be ſettled, the paſſage between the auricles, and that between the two great arteries, being open in children of very different ages; nor do both always cloſe at the ſame time. It is conjectured, however, that this proceſs ought to begin from the birth, as it is found to do in the remains of the veſſels of the funis umbilicalis;* ſo that, although the fetal apertures in the heart ſhould not be actually impervious at the end of ſome

* It is probable, however, that they are not very firmly cloſed for ſome time, as I have eaſily forced the veſſels open, by an injection, in children who have died at the end of the month.

months, it is imagined that ſome conſtriction has uſually taken place, and that, at leaſt, ſome check is given to the blood's paſſing from one ſide of the heart to the other, in the free manner it does in the fetus. This, it is natural enough to conceive, and I apprehend, is owing to a greater quantity of blood ruſhing into the lungs, in conſequence of reſpiration, (which leſſens the difficulty of entering that organ;) by which means, a greater quantity flows into the left auricle from the pulmonary veins, which filling the part, prohibits an entry from the right. Upon the like principle, the aorta being more diſtended by a large quantity of blood from the left ventricle, does not allow the pulmonary artery to empty itſelf into it by the canalis arterioſus.

Sometimes one of theſe apertures is found open, and the other cloſed up, eſpecially the canalis arterioſus, which is of the greater conſequence; the foramen ovale having in ſeveral inſtances been found pervious in adults; and it is imagined

gined is always ſo, in thoſe divers who can remain the better part of an hour under water.

WHETHER the preternatural aperture be in the veſſels, auricles, or ventricles; or whereſoever any morbid ſtricture may be, whenever it may prove of any conſequence, the conſtant ſymptoms attending it are a diſcolouration of the face and neck, with a ſloe-blue, or leaden-colour of the lips, ſuch as is met with in ſome fits of aſthma; and ſometimes an unnatural coldneſs of the body. The diſcolouration almoſt always takes place very ſoon after birth, and is increaſed, and attended with difficulty of breathing, as often as the child is any wiſe agitated; and whereby he is diſpoſed to throw himſelf in a horizontal poſture. Theſe ſymptoms are not at all relieved by procuring ſtools, by the warm-bath, or any other means made uſe of as a remedy for fits; nor can be, but by the child being kept as tranquil as poſſible.

If the aperture be in the canalis arteriosus, children usually sink very soon under the complaint, (although this is not always the case,) of which I have seen one instance a short time ago; and for want, it is imagined, of a due portion of oxygen gas, owing to the full proportion of blood not passing through the lungs. But if the aperture be in the inferiour parts of the heart, infants more commonly survive for months, or even for years; although some physiologists have conceived there may be the like disproportion of oxygenated blood. A recent instance of such prolonged life, with an accurate account of the disease, is recorded in the third vol. of the *Medical Transactions* of the *College*. In such instances, the system having been accustomed to the effects of this derangement, is better able to withstand them; the patient, however, can endure but little motion, the heart becoming thereby surcharged with blood, and respiration rendered

dered more difficult; hence alſo the blood is detained in the extremities, and the face, neck, and hands become particularly diſcoloured. Some time, indeed, before the patient ſinks under the diſeaſe, the ſymptoms are aggravated, and almoſt the leaſt motion endangers ſuffocation.

## SPINA BYFIDA, *or* HYDRO-RACHITIS.

THIS morbid affection is more commonly known here by the former of theſe terms, though the latter is thought by many to be the more proper name; the firſt being taken only from an effect, the other being deſcriptive of what is deemed the original diſeaſe. It is alſo known by other names, as writers have been ſeverally impreſſed by the cauſe, effects, or the appearance of the diſeaſe. RUYSCH therefore calls it a dropſy, and BERTRANDI,* a hernia of the medulla ſpinalis; the

* *Opere di Ambrogio Bertrandi. Tomo ij. Torino* 1786.

medullary

medullary ſtructure being in ſome inſtances deſtroyed, and a ſpongy ſubſtance filling up the cavity of the membrane, and protruding through the byfid ſpine.

It is remarkable, that this complaint, or malformation, though now every where to be met with, was not deſcribed, as I believe, before TULPIUS wrote,* whoſe obſervations and caſes were firſt publiſhed in the year 1641, and afterwards with ſome additions, as late as 1716, which is the edition I have ſeen, and contains an accurate account of the ſpina byfida.

Since the above period, the diſorder has been regularly noticed by various writers; but not being a very common one, and very little having ever been attempted or propoſed for its relief, I judged it ſufficient in the earlier editions of this work, barely to notice and deſcribe the complaint, in order to guard againſt its being miſtaken, and an infant's life ſhortened, by raſhly opening the tumour. But as

* *Tulpii Obſervationes Medicinæ.*

various

various ſolitary caſes and obſervations are diffuſed through different medical works, and none of the late writers having methodically collected and arranged them, nor any ſince MORTGAGNI paid much attention to the ſubject; I have now been induced to take it up more at large. Having alſo myſelf ſeen the diſeaſe about eight or ten times, (under which one child languiſhed ſeven weeks, and another ſeveral months,) as well as converſed with many practitioners who have as often met with it; I have thought, that in a work devoted to the diſeaſes of children, it might be agreeable, if not inſtructive to the reader, to ſee all that is of importance on the ſubject brought into one view.

With this intention, I ſhall briefly advert to the writers we are obliged to for any account of this congenite derangement; and after conſidering its nature, cauſe, and the periods at which it proves fatal, ſhall ſtate whatever has been propoſed, or attempted in a way of palliation, or cure.

IT is remarkable, that in a diſeaſe for which ſo little can be done, both the earlieſt and lateſt writers have agreed ſo well in their opinion, and deſcription of it; though ſome, indeed, do little more than mention it, notwithſtanding they all appear to have ſeen the diſeaſe. It hath been obſerved, that it does not ſeem to have been noticed by any of the ancient writers; and TULPIUS himſelf appears to ſpeak of it as of one he had not long been anywiſe acquainted with; we accordingly find him ſaying but little on its preciſe nature, or cauſe. Soon after him wrote C. STALPART VANDER WIEL, and MUYS[1], the one in the year 1682, the other in 1695, and about the ſame time BONETUS[2]; but theſe throw very little light on the ſubject. RUYSCH treats more largely upon it, and it has been noticed, calls it a dropſy of the ſpinal marrow, as the hydrocephalus is of the head, or brain, and

[1] *Praxis Medico-Chirurgica rationalis.*

[2] *Sepulch.*

with

with ſome propriety, as will preſently appear. BIDLOO[3], phyſician to King WILLIAM the third, and SALZMANNUS[4], his cotemporary, have noticed the diſeaſe. RUTTY[5] gives a good anatomical account of it. TITSINGH wrote upon it in 1733[6]. ZECHAR. PLATNER[7] more fully in 1745, and ACRELL[8] in 1748. VAN SWIETEN and MORTGAGNI wrote, it is well known, nearly at the ſame time; the former of whom copies TULPIUS and RUYSCH, but the latter quotes various other writers, and takes as much pains to inveſtigate this diſeaſe as almoſt any other that he has recorded. Our countryman Mr. WARNER,* was well acquainted with it, and relates an inſtance of a man, living to twenty years of age, though the diſorder had in-

[3] *Bidloo Opera Exercit.* 7^ma.

[4] *Diſſertatio de quibusdam tumoribus tunicatis externis.*

[5] *Philoſoph. Tranſ. Abr. vol.* vij. *inter annos* 1779, 1783.

[6] *De Spina Byfida.*

[7] *Platneri Inſtitut. Chirurgicæ.*

[8] *Memoirs of the Royal Academy of Sciences, at Stockholm.*

* *Surgical Caſes*, 1750.

duced

duced a palſy of the lower extremities; but not ſo bad as to diſable him from walking. Dr. MONRO, in his treatiſe on the dropſy, in 1756, merely names the diſeaſe; but Mr. WHITE deſcribes it well, in his ſurgical caſes, written in the ſame year. BLANCHARD alſo mentions it; likewiſe *Monſieur* LE CAT † in 1765, GOOCH in his Surgery in 1771, AMBROSE BERTRANDI ‡ in 1786, and LOUTH § as late as 1788.

BY the accounts given by theſe writers, it appears, that this diſeaſe fixes either upon the ſuperiour parts of the ſpine, and is then ſeated upon the laſt vertebra of the neck, and the firſt of the back; or elſe is lower down on the laſt of the loins, or more commonly, on the os ſacrum, and is uſually upon the centre, and poſteriour part of theſe falſe vertebræ: but WEP-

† *Diſſertation ſur la Senſibilité de la dure mere, &c.*

‡ *Opere di Ambrogio Bertrandi Tomo* ij, *Torino.*

§ *Noſologia Chirurgica.*

FER

FER * ſaw one on the right ſide of the loins.

The ſkin is ſometimes entire, and ſometimes ruptured externally, at the birth; and in the latter caſe, I believe, the infant is always ſtill-born, at leaſt, it has been ſo in all the inſtances that I have met with; though ſuch fetuſes are often full-grown. In this caſe, the edges are prominent, and the centre is, of courſe, depreſſed, the ulcer very much reſembling the form of the human mouth when the angles of the lips are drawn together, and the middle part is puſhed forward.

When the ſkin is entire, the diſeaſe appears in the form of a tumour, varying in ſize from that of a pea, or even ſmaller, to that of an half-crown piece; being alſo more or leſs elevated. The higheſt point is uſually very thin, and ſometimes tranſparent, from having no true ſkin; other parts of the tumour are red or livid, having very much the appearance of ſome

* *Weſpſeri Obſervationes.*

cancerous

cancerous tumours upon the point of ulceration. The ſurface is generally very ſoft to the touch, eſpecially in the centre, from which a fluid retires upon preſſure, and round the margin of the ſwelling the bony edges of the ſpine may be diſtinctly felt; a circumſtance that ought always to be attended to, as leading to a certain diagnoſtic. In other caſes, no fluctuation is perceptible, but a carneous ſubſtance, hard and thick; and ſuch infants cannot endure being laid on the back, but preſently become convulſed. MUYSH mentions an inſtance of the diſeaſe being ſituated between the ſcapulæ, in which the ſkin was not at all diſcoloured; the deficiency of bone was therefore, probably, very ſmall, as likewiſe ſeems to have been the caſe from the event, as will be mentioned in its place.

The internal appearances are various: ſuffice it to ſay, that as the diſeaſe takes place during the proceſs of oſſification, the internal derangement ſeems to depend very much upon the period at which the complaint

complaint may commence. In general, there is a confuſion of nerves, blood-veſſels, membranes and ligaments, together either with a hard fleſh-like ſubſtance, or a certain portion of diſcoloured lymph. This is, probably, ſmall at firſt; but the neceſſary ſupport of bone being wanting, the lymphatics of the membrane inveſting the ſpinal marrow, it has been ſuppoſed, continually depoſit their contents; enlarging the tumour, and increaſing the diſeaſe. I ſaw one inſtance in a fetus of about five months growth, where the bone (the os ſacrum, as yet, indeed, in a cartilaginous ſtate) was complete on the outſide, but deficient within; the ſpinal marrow was alſo wanting, and there was a conſiderable quantity of water.

MANY children born with this complaint do not ſeem to have ſuffered by it while in utero, being healthy, often large, and very ſtrong; but ſome are otherwiſe mutilated; it being not uncommon to find one or both the ankles diſtorted, or to have the lower extremities weak, and

ſometimes totally paralytic: and there is in others a great deficiency of bone on the upper part of the cranium. The higher up the ſeat of the ſpina byſida may be, the greater is uſually the injury, and the ſooner the infant periſhes, unleſs the aperture of the bone be very ſmall, as is ſometimes the caſe.

FROM what has been ſaid, as well as from a ſimilar diſeaſe being occaſioned by internal injuries of the ſpine, as mentioned by LE CAT,* it will appear, that the diſeaſe, as hinted above, may be owing to ſome interruption to the proceſs of oſſification, and a conſequent diſtenſion of the membrane inveſting the ſpinal marrow from the preſſure of the fluid, which in return becomes a further impediment to that proceſs. It is not improbable however, that this undue ſecretion of lymph may be oftener the original ſource of the diſeaſe; the water as an unnatural

* *Traitè de Mouvement muſculaire; de la Senſibilitè, de l'irritabilitè, &c.* 1765.

com-

compreſſion, either preventing the formation, or afterwards deſtroying a portion, of the bony arch intended by nature as a protection to the tender marrow; a part eſſential to the animal functions. Hence, LAUTH has very properly defined the diſeaſe to be, *Aqua in Specu Vertebrarum collecta in Infante, Vertebras ultimas Columnæ Pondere ſuo findens*, et *Tumorem prope Os Sacrum conſtituens:* though it does not, as it has been ſaid, appear always in this part.

IT is ſometimes a mere local diſeaſe, confined within the circumference of the tumour, and at others, the water riſes a little higher in the vertebral column; and hence RUYSCH has conſidered this diſeaſe as a proper dropſy of the part, as the hydrocephalus is of the head. In ſome inſtances again, the column is open from the occiput to the os ſacrum, and the water is even found to deſcend from the fourth ventricle of the brain; the two diſeaſes being then conjoined. Theſe diſorders have alſo ſometimes been found to

ſucceed each other; ſeveral ſuch inſtances being related by WEPFER and MORTGAGNI. The latter of theſe writers relates one of a child of four years of age, where a dropſy of the ſpine ſucceeded to an hydrocephalus, which had taken place in conſequence of a contuſion of the head. The former being opened, the tumour of the head in a little time greatly ſubſided, and upon preſſing that part with a hand, a paliſh ichor ruſhed out from the aperture in the os coccygis; a circumſtance recorded alſo in other inſtances: the above infant, he reports, recovered. In another, upon the conſolidating of the ſpina byfida after an aperture had been made, water in a few days began to form in the head, which afterwards enlarged to a very conſiderable ſize. On the other hand, it has been noticed, that there is ſometimes no water, but the bony column is filled up with a carneous ſubſtance, or ſpongy marrow, and the complaint is then termed a hernia of the ſpinal marrow; agreeably to a ſimilar congenite diſeaſe of the head,

which

which has been aptly called a hernia of the brain. In this caſe, ſome malformation of the ſpinal marrow may be conſidered as the original diſeaſe, unleſs it be ſuppoſed, that the proper cauſe exiſts in ſome interruption given to the proceſs of oſſification; whereby the medulla being deranged for want of its natural ſupport, is in conſequence diſtempered.

THE diſeaſe, it has been ſaid, becomes fatal in conſequence of the tumour being opened, or the integuments otherwiſe giving way, which is uſually from a little ſlough, or gangrene, forming upon the thinner parts, which ſoon ſpreads wider and deeper, and ſo opens a way for the eſcape of the lymph. In a few days afterwards, and uſually on the third, the infant dies, unleſs the parts ſhould ſoon cloſe again; which has but very rarely happened. A remote cauſe of the child's death then ſeems to be the eſcape of the lymph, which is frequently ſoon followed by a ſtrong convulſion, in which the little ſufferer expires. But where the

integuments have remained entire for any length of time, their rupture has been followed by hectic fever and marasmus, in consequence of a profuse drain from the part. But it is more common for the little patient to die either in a few days, or a week or two after birth, and then, probably, from some morbid change taking place in the medulla spinalis, from the admission of air; which is supposed to be always injurious to internal parts, and more particularly to membranous ones, and therefore must be peculiarly offensive to the spinal marrow and its sensible covering. These parts have, indeed, suffered from the birth, from the nature of the disorder, and it is not therefore to be wondered at, that such infants are more or less convulsed, and appear several times to be dying, before that event actually takes place, and that they are often otherwise ill; though some children appear pretty well till the integuments give way. I remember one child who would not take the breast for twenty-seven days, and

was

was ſeveral times thought to be dying; but afterwards taking to it properly, was greatly recruited; appearing, except for this diſeaſe, in a promiſing way, and lived four weeks afterwards. The late Mr. HUNTER told me, that he had ſeen a child living with this diſeaſe at the age of eighteen months.

THE means of CURE that have hitherto been propoſed for this dreadful diſeaſe, are, opening the tumour, in order to evacuate the water; or preſſure, with a view to retain it, and conſolidate the parts: neither of which, that I can with any certainty learn, have ever ſucceeded, unleſs it be in the inſtance mentioned by MORTGAGNI; but in this, the diſeaſe was not congenite. The means, however, do not always ſeem to have been employed with proper diſcrimination; ſince the very poſſibility of their ſucceeding will depend upon the ſize, and other circumſtances of the tumour: for the aperture can never be adviſeable where the tumour is large, and the conſequent internal de-

rangement of parts is conſiderable; nor preſſure where the water is found communicating with the ventricles of the brain.

The ſize of the tumour, it has been noted, is various, and agreeably thereto muſt be the poſſible chance of recovery, as well as the probable duration of the diſeaſe, where it proves ultimately fatal. This, indeed, is more frequently within three days after birth, or if the infant ſurvives much beyond that time, it will be owing to the reſiſtance of the integuments; young children, it has been ſaid, ſeldom ſurviving the third day after the water begins to be freely evacuated. This, together with the matter of fact, where the tumour has been opened, furniſh a ſufficient caution againſt artificially letting out the water. MUYS * records a caſe of this kind, in which a child had lived to be three years of age, but the tumour being then opened, a great diſchage of

* *Praxis Medico chirurgica rationalis*, 1695.

water

water was kept up, which induced a hectic fever, and the child ſunk at the end of three weeks. At the ſame time, a caſe related by WEPFER equally forbids the indiſcriminate uſe of preſſure. In this, an aperture made by a ſurgeon, from whence three ounces of water had iſſued, being healed up in conſequence of firm preſſure, an immenſe hydrocephalus formed by the end of the fourth week after birth. And VAN SWEETEN, who copies the caſe, juſtly obſerves, that if nature cannot get relief in ſuch caſes, by letting out the water at ſo diſtant a part from the head, no benefit can be derived from any means that may neceſſarily occaſion an accumulation in the brain itſelf.

IN ſuch inſtances as the above, it is probable, that the ſource of the diſeaſe has been in the head, the water having made its way from the fourth ventricle of the brain; nature ever attempting to relieve the oppreſſed, and eſpecially more noble parts. But in other caſes it ſhould ſeem, that the diſeaſe has commenced in the

the loins, and the ſecretion being great, and the reſiſtance below conſiderable, (poſſibly from the oſſification being far advanced) the water has aſcended to the head.* But by diſſection after death, it appears, that the water has more commonly been confined to the ſpine alone, and then has not been in great quantity.

IT muſt be in the latter caſe only, as well as where the tumour, and deficiency of bone are inconſiderable, that any benefit can be expected from puncture and bandage, as Mr. ABERNETHY has lately ventured to propoſe. But from ſeveral objections which have been noticed above, ariſing from circumſtances which Mr. ABERNETHY does not ſeem to be aware of, nor can be always previouſly aſcertained, I ſhould not think that parents would readily conſent to the experiment, or that ſurgeons can have much to offer as an inducement to it; eſpecially as the want of ſucceſs muſt neceſſarily haſten the death

* See *Opere di Ambrogio Bertrandi, tom.* ij.

of

of the infant. Theſe conſiderations, I imagine, have made ſurgeons in this country cautious of making any attempts, and have induced me to ſtate, as I have done, the reſult as given by foreigners.

SINCE the laſt edition of this work, Mr. ABERNETHY has ventured to make the experiment; and though he is led to think, that the attempt is, at leaſt, proved to be harmleſs, I can, by no means, alter my opinion; and have therefore ſuffered my former obſervations to remain. Mr. ABERNETHY acquaints us, that "the tumour was punctured every fourth day, for ſix weeks, during which time the child continued unaffected. No contraction, however, of the integuments took place; and at this time one of the punctures did not heal, but permitted the fluid to ooze out. The diſcharge gradually changed from a limpid to a puriform appearance, and in a few days the child died. This caſe (he adds) is intereſting, though unſucceſsful; as it ſhews, that the attempt at a cure may, at leaſt, be made without hazard."

hazard."—I ſhould, however, rather conclude, that the laſt aperture not healing up, and the child dying a few days after, ſerves to confirm the prognoſtic I had ventured to make, not only of the probable inutility of the puncture, but of the hazard. The collection of the water, if it be in any inſtances the firſt occaſion of the diſcaſe, is not the whole of the evil; there being diſtemper in the membrane, and generally of the bone, which the admiſſion of air to, cannot be harmleſs:* while the puncture cannot prevent a re-accumulation of the fluid.

FROM the general report of authors, therefore, as well as the reſult of my own experience, it ſhould ſeem, that little relief can, in general, be expected anywiſe from art. Some diſcrimination of caſes, however, ſhould be made, and perhaps

* This ſentiment, however, has lately been controverted, and ſome deciſive experiments thought to be adduced in oppoſition to it, by Dr. HAIGHTON, in a paper on the *Cæſarean* operation, in the *Medical Records and Reſearches*. An. 1798.

this

this will refer principally to the abſence of any ſymptoms indicative of water in the head, and to the ſize of the tumour, on whatever part of the ſpine it may be; but the lower down on the os ſacrum, the more favourable. As to the firſt of theſe, the uſual ſymptoms of compreſſion of the brain do not, indeed, preſent themſelves, and it is probable, owing to the relief which that part receives from the deſcent of the water to the parts below. The preſence of water in the head may, nevertheleſs, ſometimes be diſcovered, it being reported by MORTGAGNI, that upon preſſing the tumour, the riſing up of water has been felt by a hand placed on the fontanelle; and that from a firm preſſure there, the water has again forcibly deſcended into the tumour on the ſpine.

In the abſence, however, of every ſymptom leading to the ſuſpicion of water in the head, and when the tumour on the ſpine, eſpecially if low down on the ſacrum, is very ſmall, (for it has been met with

with of the ſize of a vetch ſeed ;*) a firm compreſs, and ſprinkling the part with aſtringent powders, or the uſe of ſimilar fomentations, may be had recourſe to, as recommended by ACRELL,†, and alſo by RUYSCH, who ſays he has ſeen ten caſes. ACRELL was led to this opinion from ſome children having lived for ſeveral years with this complaint: but the tumour in ſuch inſtances, I apprehend, has been very ſmall, and the children have died whenever it has acquired the ſize it has more commonly at the birth. In ſuch caſes only, I imagine, can the attempt with any propriety be made; as otherwiſe, the tumour will, probably, be only ruptured the ſooner by the bandage, and in conſequence, the life of the infant be ſhortened.

There is not, however, the like objection to the uſe of an aſtringent, or cold embrocation, or more eſpecially to dry-

* See *Ruyſch.*

† *Memoirs of the Royal Academy of Sciences at Stockholm. Anno* 1748.

ing

ing powders, ſuch as bolus armen. pulv. catechu, aluminis, and ſuch like; which may be ſprinkled on the part as occaſion may require, to prevent the oozing of the lymph, by forming a kind of cruſt over the pellucid ſurface. Such applications may alſo have a tendency to retard the rupture of the integuments, and thereby prolong the life of the child; which is generally all that art can effect: and, I have myſelf, indeed, no further experience of their efficacy in the true ſpina bifida; although I have known ſuch means, as well as exciſion of the parts, effect a cure in caſes very ſimilar in form and appearance to this fatal complaint,* but without any deficiency of bone.

IN regard to bandage, I have been informed, that Dr. HUNTER in his lectures, at one time, uſed to caution againſt the attempt, from his own experience of its haſtening, as he thought, the rupture of the integuments; but whether the trial

* See *Parenchymatous Tumours* in the next Chapter.

had

had been made in the fitteſt caſe as here deſcribed, I could get no information.

Should the ſize or figure of the head, however, be from ſuch management affected, or the infant manifeſt any increaſe of pain; or if convulſions, coma, or other bad ſymptom ſhould ſupervene; the bandage ought to be taken off, and the mildeſt application be ſubſtituted, in place of the aſtringents. In this view, a bread and milk, or ſaturnine poultice, may be had recourſe to, which is the modern practice whenever the tumour is large from the birth, and is, probably, in ſuch caſes, the fitteſt application that can be made uſe of; as it will ſit eaſy on the part, and by forming a ſoft cuſhion, as it were, for the tender ſkin to reſt upon, will in ſo far diſpoſe it to be preſerved entire as long as poſſible; the life of the child, it having been noticed, in almoſt every caſe, depending entirely upon that circumſtance.

PAREN-

## PARENCHYMATOUS TUMOURS.

THE reſemblance which ſome of theſe bear to the laſt mentioned diſorder, renders them worthy of particular notice, being not always eaſily diſtinguiſhed from it. They appear on different parts of the ſpine, but more commonly near the neck, or to the os ſacrum; are accounted *marks*, and are often of a morbid nature, and it is imagined, would not unfrequently prove fatal, if left to themſelves. As I deſign, however, treating only of ſuch as will admit of ſome remedy, I ſhall mention only two.

THE firſt is a tumour on ſome of the vertebræ, uſually of the neck, or the firſt of the back; it is of a ſublivid hue, unequal, internally ſpongy, and very vaſcular. I ſaw one of this kind ſome years ago, in conſultation with the late Sir CÆSAR HAWKINS, who adviſed to preſerve the

ſkin unbroken as long as it ſhould be poſſible, which he feared was all that could be done for it; and to this end, recommended the free uſe of the compound water of acetated litharge. It was then about the ſize of a crown-piece, and not raiſed very much above the level of the ſurrounding parts. The tumour, however, increaſed, and the ſkin not long afterwards gave way, and the child became ill; in conſequence of which the late Dr. HUNTER was deſired to give his opinion, who adviſed the extirpation of the tumour, as the only chance for preſerving the child's life: but the father diſapproved of the operation. The part ſoon began to bleed a good deal at times; in order to ſuppreſs which, as well as to leſſen the tumour, which was now conſiderably more prominent, I ſprinkled it with the following powder.

℞. Bol. Armen. Pulv. Catechu ā ʒij.
Alumin. rup. ʒj. Miſce.

Over this, compreſſes wetted as above were applied frequently through the day.

Theſe

Theſe would ſometimes adhere for ſeveral days, owing to the blood and powder forming a ſort of paſte, till a freſh oozing from the veſſels looſened them; at which time the bleeding returned, and the applications were repeated: by the continuance of which, however, for ſeven or eight weeks, and compreſſion with a piece of thin lead, the veſſels gradually ſhrunk, and the diſcharge being dried up, the part was happily ſkinned over, and the child recovered its health.

I have ſeen another tumour of this kind, which was treated in a different manner. It was ſeated on the laſt vertebra of the back, and was apprehended to be the true ſpina byfida: but as no margin of bone could be diſtinctly felt, nor the tumour, by preſſure, be made to recede, I hoped it might be otherwiſe, and ventured to adviſe taking it off, as the only chance the infant had for its life. This was accordingly done when the child was about eight days old, and though a good deal of blood was loſt in the oper-

ation, from a deep ſeated artery, the ſore at the end of the month was perfectly healed, and the child ſoon afterwards became as healthy as any other in the family.

## HEPARTOMPHALOS, *and* HERNIA VENTRALIS.

THE congenite ventral hernia, in which, from a deficiency of muſcular integuments and ſkin, ſome of the abdominal viſcera, and not unfrequently the liver, is protruded, is very often met with in abortions in the earlier months; though leſs commonly in the full grown fetus. I have never ſeen it in living children, unleſs in that inſtance of it termed hepartomphalos; which is the more immediate ſubject of this chapter, and will be clearly exemplified in the annexed caſe.

IN the true hepartomphalos, there is, poſſibly, no actual deficiency of the muſcular or ligamentous integuments, and ſtill

ſtill more propably, not of the ſkin; but as the term ſtrictly implies, ſome part of the liver forms a congenite hernia of the navel. The liver while very ſmall is ſomewiſe drawn down by the veſſels of the umbilicus which enter it, (poſſibly by ſome action of the fetus;) is protruded at the muſcular ring in the linea alba, and falls into the funis umbilicalis; which it dilates and diſtempers. This diſeaſe is a very rare one, I believe, in living children, and I had met with no written account of it, until Dr. COMBE put into my hands a *Theſis de hepartomphalocele congenita*, by FRANCISC. HENRICUS ROCKHOLTZ, printed *anno* 1768.

The caſe there related correſponds ſo exactly with the one I met with, and both the infants ſurviving the diſeaſe; but ſome months afterwards dying of other complaints, and their bodies being carefully examined; the fact is eſtabliſhed, and demonſtrates the powers of the animal machine, in removing obſtacles to its

well-doing, that might be thought inſurmountable.

THE ſubject of the preſent caſe being born in the neighbourhood of the Britiſh lying-in hoſpital, was brought there for the advice of the phyſicians on a day when I was in attendance. The child was then eight days old, and the nurſe informed me that the tumour ſtill remained of the exact ſize it had acquired when the infant came into the world; but that previous to the binding it down tight, the ſkin had ſeemed to be thinner, but was even at that time diſcoloured, though it had a kind of tranſparency, as if it contained a fluid; and that the next day it turned black.

The dry funis was now appending from the centre of the tumour, which was as large as a good-ſized china-orange; was black, and the ſkin, as I thought, in a ſphacelated ſtate.

Whether this tumour contained the liver, or any of the inteſtines, I could not

not at all determine; or whether it might be a mere parenchymatous enlargement of the funis umbilicalis, of which I had lately ſeen an uncommon inſtance, of about one third of this ſize; but in that, the enlargement commenced about three or four inches from the belly.

I had little doubt, however, from the ſize and colour of the tumour, that in the preſent inſtance, the infant would die in a few days, or at leaſt, ſoon after the integuments ſhould give way; as it appeared highly probable, there would then be an opening into the cavity of the abdomen. I directed nothing therefore, but a bread and milk poultice, and this merely in the view to its being a ſoft cuſhion for the tumour to reſt upon; which did not, however, appear to be very ſenſible, though the infant cried much upon being moved, as if it were thereby put to pain.

Four days afterwards the child was brought again to the hoſpital. There was then but little change in the appearance of the tumour, nor much diſcharge

from it; and the child having taken kindly to the breaſt had a healthy appearance; ſo that ſave from the ſuſpicion ariſing from the nature of the tumour, it ſeemed very likely to live. Half an ounce of the decoction of bark was directed to be given three times a day.

I did not ſee the infant again for three weeks; and it was then near five weeks old. I now learned, that the child had thriven ſo well the parents were ſatisfied it was likely to live; and that the funis had fallen off on the fifteenth day, without being followed by any unpleaſant ſymptom. That the tumour had burſt about a week after the funis came off, from which time the ſwelling had ſenſibly ſubſided as the diſcharge kept up; and that at the end of the month, the diſcoloured integuments all ſloughed off, and left a ſuperficial ſore of the ſize of a ſmall tea-cup, to uſe the mother's expreſſion.

The poultice was directed to be continued until I ſhould ſee the infant again; which

which was about a week afterwards. There was then an oblong, benign, ulcer, about the ſize of a ſix-pence, and diſpoſed to heal up. I now deſired the poultice might be left off, and only to apply a bit of cerat. è lapide calamin. and moderate compreſs. By theſe means the ſore was healed, when the infant was eight weeks old; ſoon after which I ſaw the child in perfect health.

The integuments at this time had not the uſual appearance of the navel, but were on the contrary, thin, and little elevated, but without any thing like an umbilical hernia. The ſcar was not larger than a ſix-pence, and was not preciſely in the middle of the abdomen, but a little on the left ſide of the point from which the funis naturally riſes.

From the diſagreeable appearance of this caſe when the infant was firſt preſented at the hoſpital, ſuch a termination was very pleaſant to us, as it leads to encouragement concerning other obſcure diſeaſes; and manifeſts what unexpected things

things nature is capable of effecting, even at this early period, when not interrupted by any improper treatment.

The unfortunate infant, it has been ſaid, fell a ſacrifice about ſix months after birth, to another diſeaſe; in conſequence of which its body was afterwards carefully examined by Dr. MARSHALL. Dr. COMBE happening to hear of it, was preſent, and informed me, that there could be no doubt of the liver having occaſioned the tumour we had ſeen; there being yet a ſenſible depreſſion remaining, evidently marking the ſtricture made upon it by the linea alba and recti muſcles; which had included about one third of its left lobe.

Since the laſt impreſſion, I have met with another inſtance of the hepartomphalos, in a full-grown, but ſtill-born fetus; the complaint being alſo aſcertained by an examination of the parts.

WHENCE it ſhould come to paſs, that infants ſhould not only be born alive with, but ſurvive, the hepartomphalos, rather

rather than the common ventral congenite hernia; or than they would do a large congenite exomphalos of the inteſtine; may be worthy of inquiry in this place. And the reaſon, probably, may be, that in the hernia ventralis congenita, whether from the protruſion of the liver, or any other of the abdominal viſcera, there muſt be a deficiency of the muſcular and other coverings of the abdomen, and therefore, nothing to ſupport, or defend the protruded organs ſo eſſential to life, but the thin peritoneal expanſion. But that, in the former, there is, perhaps, no actual loſs of ſubſtance, but a mere dilation of the parts; the liver being at the ſame time defended by the ſtrong expanſion of the funis umbilicalis, which does not give way after birth, until nature has had ſufficient time to withdraw that viſcus into the cavity of the abdomen. This, it is imagined, is effected not only by the removal of the firſt cauſe of its deſcent, but alſo by that reſpiration which takes place immediately on the birth, and is

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further aſſiſted by the ligament by which the liver is attached to the diaphragm; and by means of which it is mechanically drawn up, during every exſpiration.

## *On the* HARE-LIP, *and other* EXTERNAL BLEMISHES, *or* DISORDERS, *ſuppoſed to be* MARKS *of the* MOTHER.

THOUGH it be beyond the preſent purpoſe, to treat on ſurgical *Operations*, in general, I ſhall beg leave to notice a circumſtance or two relative to that for the *hare-lip*, as I already have in a few others, which frequent opportunities of comparing the different ſucceſs attending them have furniſhed. I ſhall afterwards advert to ſome other equally common blemiſhes, in a view to aſſiſting the younger part of my readers to combat the unhappy prejudices of mothers in relation to *marking* their children. This, unfortunately for them-

themſelves, they are always diſpoſed to attribute to a violent impreſſion from the ſight of ſome diſagreeable object, or to a diſappointment in ſomething they may have longed for, during their pregnancy.—And I have choſen this place for ſuch obſervations as I have to offer on this head, becauſe the *hare-lip*, and ſome other blemiſhes remaining to be noticed, bear that reſemblance to objects around us, which is wanting in thoſe before mentioned.

The repeated experience of every attentive obſerver, has uniformly militated againſt the tormenting ſuſpicion alluded to, but ſtill it prevails, though only to the injury of thoſe who ought, for their own ſake, to be perſuaded to the contrary. Every man long in buſineſs has known many inſtances of mothers, tormenting themſelves for ſix or ſeven months, in the painful apprehenſion of diſcovering ſome ſad blemiſh in the child, (and on this account have trembled to look on it when it has come into the world;)

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which has afterwards proved to be as perfect as they could have wiſhed, and as the more diſpaſſionate amongſt their friends have all along ventured to foretel. On the other hand, where children have been born with ſome real blemiſh, it has never been ſuſpected by the mother,* unleſs now

* Among ſeveral inſtances of ſuch blemiſhes in children born in the Britiſh Lying-in Hoſpital, we have had ſome remarkable ones of the *entire ignorance* of any ſuppoſed cauſe. In one, the infant was more marked than almoſt any one I have ever ſeen; but I ſhall only notice, that the eye-lids, part of the noſe and temple, and the greater part of one of the cheeks were as black as ink, and exactly reſembled a dry gangrene of the parts. In a recent inſtance, the extremities were uncommonly ill-formed, not unlike thoſe of aquatics; but the mothers of theſe infants had gone on to their full time, without having received any fright they could recollect, or ſuſpecting any thing amiſs in their children.

Theſe children, however, were really ſo diſfigured, that a lively imagination, with a mind ſtrongly impreſſed, might not only have conceived in them a great reſemblance to many objects, but it is more than probable, that the parents muſt have actually noticed not a few ſuch, during the period of geſtation. Where any

now and then in a moſt timid perſon, (who has always bred in fear on account of one diſagreeable object or other ſhe has ſeen,) or elſe, the blemiſh has turned out to be ſomething *perfectly irrelative* to it. And here it ought to be noticed, that where a child has really been marked, and

any ſuch deformity therefore may actually have taken place, practitioners ſhould argue the point with their patients, and endeavour to perſuade them, that ſuch ſights have not been the true cauſe of it, and that ſuch objects, therefore, cannot contribute to the production of the like appearances another time.—In this view, I cannot help obſerving, that a few years ago, a lady of rank acquainted me, that ſhe had paſſed almoſt the whole term of geſtation in the apprehenſion of her infant being born with a *Hare-lip*, on account of her having been daily met by a labourer working in her own grounds, who had ſuch a blemiſh. In this inſtance, the imagination ſeemed to have done its utmoſt; as the lady conceived ſhe met this man oftener than any other, and that ſhe could not avoid him, walk whichſoever way ſhe might; and in conſequence had his image continually before her, either in reality or in recollection; and being kept under a continual alarm by it, in the end declined walking at all in her garden.—After the opinion I have advanced, it may be needleſs to add, that the child was born free from the apprehended, or any other blemiſh.

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the mother has inſiſted on her having ſeen, and been frighted by an object which the blemiſh has reſembled, it has (to the beſt of my knowledge, at leaſt,) appeared always to be an after-thought, by which the ſuppoſed occaſion of it has been diſcovered; and has not been taken notice of before-hand.—It is, however, the furtheſt from my thoughts to upbraid the ſufferer on this painful occaſion. I wiſh only to obviate the influence of a ſentiment that I take to be without foundation—a ſentiment that has originated in ignorance, and to which nothing but length of time and preſcription could have given a ſanction.

THAT there are blemiſhes which bear a reſemblance to various objects around us, daily experience has proved; though the true occaſion of them is not, perhaps, underſtood. The like deviations from the ordinary courſe is obſerved, not only in various other animals, and that not unfrequently, but alſo in the vegetable kingdom; in which the ſuppoſed influence

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can have no place. Thus, fruits are often joined together and diſcoloured, having excreſcences, and odd ſhapes; offering ſtrange repreſentations reſembling animals, as well as anomalous irregularities, ſimilar to thoſe found on the bodies of infants: all, doubtleſs, proceeding from the eſtabliſhed laws of motion, though not well underſtood by us.

IN regard to various diſcolourations in the ſkin of infants, fancied to reſemble fruits, and like them becoming of a deeper red in ſummer; it may, however, be in point to obſerve, that the epidermis is, in ſuch kind of marks, frequently altogether wanting, and if not, is always thinner than on other parts. The ſmall blood veſſels being alſo more numerous, or nearer the ſurface, the diſcolouration of the ſkin becomes a natural conſequence; nor can it be any wonder, that this diſcolouration ſhould be greater in ſummer than in winter, the cutaneous veſſels being then more turgid with blood. The like change takes place in every mark on

the face, when the perſon either cries, or is made angry, or when by any other means the blood is made to aſcend to, or reſt longer than uſual in the ſuperiour parts. All ſuch appearances are, therefore, very eaſily accounted for, without ſuppoſing them the conſequence of the parent having longed for ſuch fruits as ripen, or grow red, in the ſummer months. We obſerve alſo ſimilar changes in adults from long continued ſevere exerciſe, or hard-drinking; many people, before of a fair complexion, ſuddenly acquiring a red face, or have the noſe both diſcoloured and mis-ſhaped.

The laws of motion will alſo equally account for the mutilation, and want of parts, the growth of which is ſomewiſe interrupted; it being well known, that the ſeveral members and parts of the body are not all formed or unfolded at once, but are puſhed forward in their turn after ſome eſtabliſhed law of nature, and organical matter. If, therefore, a due proportion of nouriſhment be with-held from

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any part, its proportionate growth is ſuppreſſed, or its formation entirely prevented. Hence the hare-lip; the two ſides of the face, which are ſaid to be formed ſeparately, being hereby prevented from growing together:* the upper lip is, at leaſt, one of the laſt parts that come into coalition. For the like reaſon it is, that infants come into the world with large ventral herniæ, the muſcular parietes, and eſpecially the ſkin being one of the laſt proceſſes in the embryo.† But whatſoever may be the weight of theſe obſervations, there is certainly nothing that we know of in a fright or longing, that can produce ſuch a change in organized matter, nor can operate in the manner that has been ſuppoſed, much leſs at ſuch different periods; but there is on the other hand, every thing againſt

* For further remarks on this ſubject, the reader is referred to a Paper written by Mr. LUCAS of *Leeds*, in the *Memoirs* of the *Medical Society* of *London*, Vol. IV.

† HARVEY, *Exer.* 56 and 69.

ſuch an hypotheſis; which has accordingly always given way in enlightened ages.

It is well obſerved by Dr. BLONDEL, that were a due catalogue drawn up of all the irregularities, diſcovered at the birth, that are ſuppoſed to proceed from the mother's *Imagination*, they would appear to be the ſame over and over again, with no great difference, and very capable of being reduced into certain claſſes. Does not this intimate, that they proceed from the laws of motion, and the ſtructure of the organs? There are beſides many conſiderable deformities, which are never referred to the *Imagination*, viz. the irregular conformation of the viſcera, &c. Is the whole empire of the microcoſm ſo divided between Nature and the Imagination, that one rules within, and the other governs the outward parts?

The fetus is alſo a diſtinct individuum; it has the circulation of the blood independant on the mother; its own genus nervoſum; a ſeparate ſecretion of juices, and

and all the functions of animal economy in itſelf. On this account, we ſee a weak mother bearing a very ſtrong and luſty child, et vicé versà; the mother being to her infant, what the earth is to a plant: the latter being ſtrong may not be injured by being moved into a very different ſoil; or being tender, may, or may not, be benefited by it.

CHILDREN have likewiſe diſeaſes of their own while in utero, ſuch as cataract and gutta ſerena, varices, aneuriſms, hydrocephalus; they are born blind, deaf, &c.

THE inſtance ſo often adduced from the ſacred hiſtorian in oppoſition to ſuch arguments,* is, by no means, in point: for without adverting to the very peculiar natural circumſtances in that tranſaction, which are wanting in ordinary inſtances, it is ſufficient to obſerve, that there was therein an evident ſupernatural interpoſition. Should any one doubt of this, he has only to make a ſimilar experiment, the reſult of which will, probably, have

* *Geneſis*, Ch. 30. ver. 37-42.

more weight than ten thouſand arguments.† As matter of fact therefore, as before obſerved, does not at all countenance, but directly contradict the hypotheſis, there is good ground for married women being argued out of ſuch fears, and delivered from that painful conflict for weeks and months together; which ſo many of them endure. It will give me great pleaſure if any thing I have advanced on the ſubject, ſhould anſwer ſo deſirable an end; whilſt reaſon, philoſophy, experience, and every thing on which we ought to depend, conſpire to ſupport ſuch an attempt.

AMONGST the various *Marks* reſembling ſome of the objects around us, that called

† Though I have ventured to ſay this, it is probable, there was alſo a coincidence of circumſtances, although not in the manner vulgarly conceived of.—For many critical and ſatisfactory remarks, however, on the above paſſage of holy writ, the more curious reader may conſult a learned tract, on the *Strength of the Imagination in pregnant women*, written by Dr. BLONDEL, a member of the College of Phyſicians, *Anno.* 1727.

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the *Hare-lip* is the moſt common; a blemiſh therefore too well known to require a formal deſcription. It is ſufficient to obſerve, that it is of two kinds; the ſimple, wherein the upper lip only is divided, either wholly or in part, with ſome loſs of ſubſtance; and the complex, in which the fiſſure of the lip is double: in ſome inſtances, the portion between the fiſſures is likewiſe too ſmall to fill up the cavity, and in ſome it adheres to the very tip of the noſe. The upper jaw, alſo, with the palate of the mouth, and even the uvula are ſometimes divided. It would be beſide my purpoſe, in this place, to treat of the manner in which this deformity and defection is to be remedied, eſpecially as that muſt vary conſiderably in different caſes; I ſhall confine myſelf to ſpeaking only of the time in which it ought to be attempted.

Various conſiderations contribute to make the diſtreſſed parent ſolicitous to have this blemiſh removed ſoon after the infant is born, or at furtheſt before the

month ſhall be expired. On this account, I am convinced, the operation has ſometimes been prematurely performed, contrary to the better judgment of the operator, and the child thereby fallen a ſacrifice; whilſt others have received much leſs benefit than they would have done, had the operation been poſtponed for a reaſonable time. Where the blemiſh is very trifling, indeed, and the operation ſimple, it may, in many caſes, be done with ſafety in the courſe of the month, or a little after; and if the child be able to ſuck, which is not always the caſe, there are even ſome advantages in performing it ſooner. For as the child will not be able to take the breaſt for two days at leaſt after the operation, it will with difficulty be kept tolerably quiet by the ſpoon after it has been once put to the breaſt; but as infants need but very little nouriſhment for the firſt days after birth, and generally ſleep a good deal; if the operation be done twenty-four hours after the child is born, it will be in a condition

tion to ſuck by the time it requires much nouriſhment, and the mother's breaſt is prepared to furniſh it. But in the complex hare-lip the caſe is exceedingly different, and the longer the operation is poſtponed, the better it is likely to ſucceed; and ſhould, at leaſt, be deferred till the child ſhall be four or five months old. By this time alſo, the infant will have got over the period in which it is peculiarly liable to ſeveral painful and dangerous complaints; will be thoroughly weaned from its hankering after the breaſt, and have learned to feed contentedly with the ſpoon; by which children with this kind of hare-lip are obliged to be ſupported, they being generally unable to ſuck. At this period likewiſe, the parts will have acquired ſuch a ſize as will admit of handling them to greater advantage, as well as a degree of firmneſs neceſſary to retain the needles; for the want of which, though the operation may appear to have been favourably performed, the needles will ſometimes break out, and the deformity

mity be but little removed, or perhaps ſometimes increaſed.

I HAVE once ſeen another blemiſh of the mouth in a child born at the hoſpital, which required a ſimilar operation. In this infant, the mouth was much wider on one ſide than on the other, and appeared as if it had been divided far into the cheek, which occaſioned a very awkward appearance; but as it was capable of being remedied in the ſame manner as the hare-lip, I ſhall only obſerve, that when I withdrew the pins on the third day, the parts adhered very firmly, and the child left the hoſpital at the uſual time.

AMONGST other blemiſhes that may require ſurgical aſſiſtance, are thoſe which women are wont more eſpecially to call *marks*; being ſpots, more or leſs elevated above the ſurrounding ſkin, and of various forms and colours. Theſe may fall on any parts of the body, but are very little regarded except when found on ſome uncovered part, eſpecially the face, where,

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perhaps, this kind is moſt commonly met with.

Theſe, however, vary ſo much in ſhape, ſize, and in ſome other more important circumſtances, that it were nugatory to attempt to point out the preciſe operation adapted to many of them. Suffice it to ſay, that in ſome, exciſion of the diſcoloured and elevated parts, or deſtroying them by cauſtic, is the only remedy; in others, compreſſion alone is ſufficient; and in a few, compreſſion, together with ſlight puncture and cauſtic will be called for. In ſome parts of the face, as the cheeks, lips, the noſe and near the eyes, the knife or lancet muſt be had recourſe to with caution; though whenever made uſe of, it will be neceſſary to carry them full as deep, and far, as the diſtempered veſſels may happen to extend, or the operation will not be completely ſucceſsful. It is, indeed, ſometimes neceſſary to repeat it; and it will be better to do ſo, than to deſtroy any ſound parts unneceſſarily, by which the

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ſcar might be extended. Where great caution has been found neceſſary, it will ſometimes happen, that though the blemiſh may ſeem to have been fully removed, the redneſs and tumour will after ſome months return; but even here, as a touch with the argentum nitratum, after lightly ſcarifying the parts, or at moſt, the carrying the lancet a little deeper than at firſt, will perfect the cure, it were pity it ſhould be neglected, diſtreſſing as the idea of a ſecond operation muſt be to the parents of the infant. In ſome inſtances, however, the recurring elevation as well as diſcolouration of the part, when ſlight, have gradually ſubſided without a ſecond operation; which it may therefore be proper to defer for a few months: an inſtance of which I ſaw lately, where a ſecond operation had been adviſed by the late Mr. HUNTER. From the very great advantages derived from theſe means, in ſome very unpromiſing caſes that I have been witneſs to, I have been led to offer theſe remarks; and not doubting, that

other

other practitioners have ſeen the like, I wiſh to impreſs the idea of conſulting ſome ſkilful ſurgeon upon every great blemiſh; perſuaded that many parents will, in the event, have occaſion to be thankful for ſuch conſultation.

A DIFFERENT kind of blemiſh conſiſts in little tumours and ſuperfluous parts, without any diſcolouration of the ſurface. The former lie more or leſs deep under the ſkin, and conſiſt of extravaſated lymph, hardened fat, or indurated glands. Some of theſe likewiſe may be effaced merely by compreſſion, while others can be removed only by cauſtic or exciſion. Pendulous parts, ſometimes adhere only by a ſmall baſe, like a thread, and may then be removed by only paſſing a tight ligature round them. But ſhould any even adhere more firmly, and be only a ſmall joint, ſuch as a finger or a toe, it were better to have it taken off on the firſt days; as the veſſels will then bleed but little, and the griſtles by which ſuch joints are uſually connected, are not yet be-

become bony. But ſhould the part be more completely formed, it may be neceſſary to delay the operation awhile longer, that by diſcovering which of the duplicates may take the lead, the more promiſing one may be preſerved; which is not always to be known with certainty at the birth.

I MENTION one more trifling blemiſh, which I note with a peculiar ſatisfaction, from experience that nature alone is able to remedy it in certain inſtances wherein I had previouſly conceived, that ſome conſiderable recourſe to art would be neceſſary. This conſiſts of diverſe unnatural forms of ſome parts about the head, particularly of the ears and noſe. The latter of theſe is, certainly, of the more importance, and is ſometimes turned greatly on one ſide, with one of the noſtrils open very largely, and the other compreſſed. Suffice it to ſay, that after trying what might be done by plaſter, bandage, and other contrivances, nature alone by the force of the circulating juices,

juices, has brought the parts, in the courſe of a few weeks, into their proper form.

BEFORE I quit this part of the ſubject, I ſhould remark, that certain maculæ take place even after birth; but theſe are not very common. They conſiſt of ſmall red, or black ſpots, about the face, and I believe are diſpoſed to increaſe in ſize, and ſhould therefore be early removed by the point of a lancet, as may then be eaſily done.

Beſide theſe, there are blemiſhes of far greater importance, ſome of which demand an operation as the only chance for preſerving the life of the infant. Such are imperforations of the vagina, the anus, and the urethra.

THE VAGINA is ſometimes imperforate on the external, at others, only in the more internal parts; and is in different degrees. The latter more commonly relates only to the hymen, which requiring an operation to be performed about the age of puberty, I ſhall do no more than

than barely mention here, eſpecially as it requires only a ſimple, or crucial inciſion, and to preſerve the orifice open. Where the imperforation is in the ſubſtance of the vagina itſelf, I have never found an operation to be of any uſe, though I have known it attempted, in the adult, with great addreſs and reſolution.

I have never met with the external parts totally imperforate, there being always a ſmall opening at the meatus urinarius; but I have found the aperture to the vagina ſo very ſmall as to require a little operation, which is mighty eaſily done with the point of a lancet, there being always a raphè, or line, directing the extent nature has ſeemed originally to intend, which being cut through, requires only to be kept apart for a few days, by a bit of fine lint.

This has been the uſual mode of remedying this defection; but I have for ſome years altogether rejected the aſſiſtance of the lancet, the parts being very eaſily ſeparated by the fingers even in children of

of ſeveral years old. It is not improbable, that the like method might ſucceed though the operation ſhould be neglected till the time of puberty, the parts ſeeming rather to adhere in conſequence of ſome very ſlight inflammation, than to have been originally ill-formed. A mere oozing of blood is perceived in conſequence of this mode of ſeparating the labia, which in the preſent inſtance, at leaſt, ſeems preferable to inciſion, and may poſſibly afford leſs pain to the infant, as well as be leſs unpleaſant in idea to its parents.

It is in this inſtance peculiarly important, that practitioners in midwifery, and others attending at the birth, ſhould examine infants very attentively in regard to this complaint, which may be otherwiſe overlooked; the defection proving no obſtacle to the natural excretions. I have met with ſeveral inſtances of it in children from three to ſix years old, in whom the complaint was but newly diſcovered, and it has been, in others, neglected to

the time of puberty, and even of marriage, and muſt then prove of ſerious conſequence, and may even be attended with hazard.*

THE RECTUM likewiſe is ſometimes found opening into the vagina; a caſe that affords but little proſpect of relief. It ſhould, however, be attempted; but the kind of operation muſt depend ſo much upon circumſtances, that it cannot be here pointed out with any preciſion.

THE ANUS is ſometimes cloſed only by a thin membrane, ſo that the day after birth the meconium may be diſtinctly felt, and in a manner ſeen ſhining through it. ZUINGERUS† reports ſuch a caſe, which was relieved by only a ſlight puncture with a lancet, and paſſing the point of a finger into the bowel for two or three days afterwards—a bougie, one ſhould think, would be every wiſe as proper.

* See Henrici a Morniſhen Obſervationes Medico-Chirurgicæ. *Dreſdæ*, 1691.

† Theodor. Zuingerus. *Baſileæ*, 1722.

But

But more commonly the imperforate anus is a melancholy caſe, as it ſeldom allows of an effectual remedy, the gut often terminating in a cul de ſac ſo high up as not to be reached; it is not, however, always to be deſpaired of, though no fluctuation of the inteſtinal contents ſhould be felt for two or three days after the infant is born.

Though this ſad defection is not very uncommon, I remember only two caſes of the kind in live-born children at the Britiſh Lying-in hoſpital. One of theſe, it fell to my lot to attend, and I happened to ſucceed, contrary, indeed, to all expectation, and after the child had puked up a great quantity of meconium; and not only the belly, but alſo the face was become exceedingly tumid, and the eyes had not been opened for ſome time.

THE manner of doing this operation muſt, in different caſes, depend ſo much on the diſcretion of the operator, that I ſhall do no more than deſcribe that which I made uſe of in the inſtance alluded to;

and this may, poſſibly, be acceptable, as the operation is not often performed with ſucceſs. It may be previouſly obſerved, that it ought to be poſtponed as long as it ſafely can, that the depending part of the bowel may be diſtended, and puſhed as low down as poſſible; the reaſon for which is ſufficiently obvious: and to this delay I am much inclined to attribute the ſucceſs with which it was followed in the operation I performed.

This was not determined upon by my colleagues till the third day. A longitudinal inciſion was then made, of about half an inch, above and below the part where the anus ought to have been, which was marked by a little excreſcence; a ſmall biſtoury was afterwards thruſt up in the uſual direction of the bowel, for more than an inch. No meconium following this puncture, I examined carefully with my finger, and feeling ſomething like the fluctuation meconium would make, I introduced a trocar, and withdrawing my finger, I carried up the inſtrument in ſuch a direc-

a direction as to avoid injuring the bladder, or forcing it againſt the os coccygis, for near an inch further; making allowance, however, for the yielding of the parts, which might be ſomewhat forced up by the trocar. The inſtrument having now paſſed forwards, without that reſiſtance it had hitherto met with, gave me the ſenſation of having entered a cavity; when withdrawing the trocar, we had the ſatisfaction of finding the meconium running out at the canula. The child was now put into a warm-bath, up to the waiſt, and in a few minutes having voided a conſiderable quantity of meconium, it opened its eyes, looked cheerfully about it, and fell into a pleaſant ſleep before it was taken out of the bath.

A piece of bougie was occaſionally introduced, and ſometimes left in the part, for a few hours, for the firſt fortnight; after which the child recovered faſt, and at the uſual time was taken from the hoſpital in pretty good health, though it had been much reduced by a bad thruſh,

which unfortunately made its appearance ſoon after the operation; but it always voided its ſtools perfectly well.

THE imperforate PENIS is not quite ſo common a caſe; but is not unfrequently ſuſpected, when the aperture of the paſſage is merely ſtopped up by a little mucus; and ſhould therefore be examined in good time. In this caſe waſhing the part with warm milk and water, or at moſt, a little aſſiſtance with a ſmall probe, or any ſuch blunt pointed inſtrument, will be ſufficient to open the paſſage. But it is evident, if the urethra be wanting no operation can be undertaken: it is, however, more commonly found open a certain way, and often as far as the baſis of the glans, and ſometimes near to its extremity; in which laſt inſtance, it is neceſſary only to make a ſmall aperture with a lancet, or a fine trocar, and to keep the part open by the occaſional introduction of a ſlender bougie. The more common complaint of this part however, is that of the urinary paſſage terminating by

by a ſmall aperture at a little diſtance below the glans, and ſometimes on one ſide of it. In theſe caſes, the preciſe circumſtances muſt determine the propriety of any operation; which if not judiciouſly managed, may render the caſe worſe than it was. I recollect two indeed, in which I was able to do conſiderable ſervice, one of which was in the preſence of the late Sir CÆSAR HAWKINS, and the other of the late Dr. HUNTER; in the latter, the urine was diſcharged from one ſide of the penis, and pretty low down, which was very happily remedied.

There are other mal-formations of this part, by which it is drawn downwards, or to one ſide; the peculiar circumſtances of which, muſt point out the nature of the operation moſt likely to afford relief. This will generally conſiſt in a ſimple inciſion of the ſkin, where it may happen to be too tight or ſhort, and keeping the divided edges at a diſtance from each other, till the little ſore ſhall be healed; or ſometimes by dividing the upper part

of the prepuce, as in the periphimosis; which I have found successful in a late instance.

I HAVE likewise known the EARS to be imperforate, a case that admits of no remedy; but the external appearance may sometimes be improved, when the helix is turned forwards over the tragus, covering that part which ought to lead to the internal ear; but in these cases, I have always found the concha, and meatus auditorius, totally obliterated.

ANOTHER, and a very common blemish, is that called SQUINTING, which is sometimes contracted by very young infants, and may then frequently be remedied, especially if confined to one eye; but if a child be born with this deformity, or it be consequent to fits, it is not so likely to be removed. The means I have to recommend are, indeed, very simple. A very important one, however, is to apply a piece of sticking-plaster spread on some bright-coloured silk, in such a position, either on the temple, or the nose, agreeably

ably to the ſide on which the eye is diſtorted, as may draw it the contrary way. In order to keep up this attraction, the colour of the ſilk ought to be varied from time to time, as well as its ſituation, placing it a little higher, or lower, both for the ſake of change, that the ſkin may not be fretted, as well as to anſwer any other end, that a due obſervation on its effects may point out. Beſides this, the child ought always to be placed with that ſide towards the light from which the eye is diſtorted; and for the like reaſon, its parents, nurſe, play-things, and every other object that can attract its notice, ſhould as conſtantly as poſſible be on the ſame ſide, that the child may have every inducement its age and circumſtances will allow, to draw the eye the right way, and by early habit, counteract a muſcular action that is not yet become permanent.

Another method more proper for older children, is covering the eyes with ogles, which are glaſſes fixed in a little caſe, ſuch

ſuch as many people wear when they ride on horſe-back. They muſt be ſo placed, that the child can ſee no object but by turning the eyes to the ſides from which they are diſtorted. Or, an opake covering of a ſimilar form may be worn, with only a very ſmall aperture in the center, by which the child will be obliged to look ſtrait forward. It is ſcarcely neceſſary to add, that theſe contrivances muſt be worn conſtantly, till the bad habit ſhall be overcome.

WHERE the caſt is confined to one eye, it has been recommended to cover the other; whereby the infant will in a little time acquire the habit of directing the affected one more properly. After this, the ſound eye ſhould be gradually uncovered, ſo as to admit the light by degrees. The child, it is ſaid, will by this means very ſoon be enabled to direct both eyes properly to the ſame object.

To this end likewiſe, ſuch children may be made to look at their own eyes in a mirror for a few minutes, ſeveral times

times in a day; but with the precaution that each eye be directed to that which correſponds with it in the glaſs; contriving, ſomewiſe, to render this remedy a kind of amuſement. I ſhall only add on this head, that children who are inclined to ſquint ought not to be expoſed to a very ſtrong light, nor learn to read very young.

Infants are liable, indeed, to innumerable blemiſhes; but as I mean to treat only of ſuch as call for medical attention, and admit of ſome remedy, I ſhall mention only two or three more, which are very common, and with them cloſe what I have to ſay on their Complaints.

## VARI *and* VALGI.

THESE are diſtortions of the feet, and differ only with reſpect to the ſide to which the foot is turned; in the former, the ſoles of the feet being turned inwards, and

and in the latter outwards: the curative intention is therefore alike in both. The complaint is ſometimes very trifling, and ſeems to have been owing only to ſome cramped poſition of the feet in utero, and in that caſe, diſappears before the end of the month. In other inſtances, there is evidently a contraction, if not accurtation of the tendons, which calls for conſiderable attention. The remedy, however, is obvious enough, and frequently conſiſts only in the proper application of a roller and paſteboard ſplints, ſo as gradually to bring the foot to its natural poſition; and in proportion as it inclines thereto, increaſing the force and tightning the roller, every two or three days.

THERE is alſo another very common diſtortion of the feet, in which they are turned upward towards the inſtep: but the mode of treatment is alike in them all, and the cure will uſually be effected in a reaſonable time.—The like eaſy means, therefore, will generally be ſufficient to remedy a contraction of the joints

joints of the fingers, and various awkward poſitions of the toes, with which ſome infants come into the world.

All theſe complaints may, nevertheleſs, be ſometimes more conſiderable, and in ſuch caſe, eſpecially if neglected for many months, or even years, as they ſometimes are, require the aſſiſtance of ſome ſteel inſtrument, or irons, (as they are called) which are properly contrived for theſe and other diſtortions, as of the knees, &c. by *Meſſrs. Bowley*, *Sheldrake*, and other truſs-makers; who ſeldom fail of bringing the parts into a more natural form, even in the worſt caſes, whenever the complaint may be thought worthy of the time and attention that may be required. But a leſs troubleſome contrivance, and therefore better adapted to ſome country places, is a ſhoe made of tin, and lined with leather, as invented by Mr. WHITE of *Mancheſter*. This muſt be well adapted to the foot, and a part of the leg, and be properly ſecured by ſtrings.

OTHER imperfections might be noticed, either remediable by obvious means, to be adapted, according to particular circumſtances, by the perſons attending; or ſuch as happily remedy themſelves in a little time. Among the former, I ſhall, however, mention one that occurred lately, which being new to other gentlemen who were conſulted as well as myſelf, its favourable termination afforded peculiar ſatisfaction.

The ſubject of this, beſides a ſlight degree of varus in one foot, had a contraction of the leg and thigh on that ſide; ſo that the heel and foot were drawn back towards the nates, and the knee to the abdomen. In this poſition the infant ſeemed to be eaſy, but to ſuffer great pain when the limbs were forced into the ſame extended poſition with the others: for it never ſtretched them out itſelf for upwards of three weeks. Two or three conſultations were held during the month, and it was thought by one gentleman, that the glutæi muſcles were a little ſwollen;

len; but this fulneſs was not very evident. Oily embrocations, a bliſter, leeches, and the ſemicupium were had recourſe to, of which the two latter were probably the moſt uſeful; but it was not until they had been ſeveral times employed, that the infant was obſerved to ſtraiten the limb, and at firſt, only now and then; but a few days afterwards it moved it as freely as the other.

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AS a matter of curioſity and novelty to the young reader, I ſhall cloſe this part of my ſubject with briefly noticing certain peculiarities reſpecting the eyes and hair; ſome of which have likewiſe been laid to the charge of the *imagination*. Hair, for inſtance, of an unuſually light colour, has at the age of three or four years, changed in a ſhort time to a very dark brown; and the child in conſequence, not been recogniſed by thoſe who had not ſeen it for ſeveral months. Accounts of a ſimilar change in the colour of the eyes are, I believe,

lieve, not well founded; at leaſt, I have never noticed it myſelf, nor heard of ſuch a change upon good authority; though the eyes of infants ſometimes become a little darker, than they have been thought to be at the birth. But there are inſtances of infants born with the eyes of different colours, as well as the hair on the head; and in both, the colour is permanent. Sometimes, only one lock of hair has varied from the reſt; but I have ſeen two inſtances of the one half being red, (as it is termed) and the other half, in one inſtance, black, and in the other, white. In the latter, the white part was exceedingly bright, ſoft, and of a ſilky texture, unlike that of hair, but feeling like undreſſed, or raw ſilk, and no wiſe differing from that of the *Albino*,* of which likewiſe,

* As a matter of like curioſity may be added a brief account of the *Albino*.

THIS name is given by the *Italians* to children whoſe heads are covered with a peculiar white hair of a very ſoft texture; not uncommonly met with about the *Italian* ſide of the *Alps*, and likewiſe in *Switzerland*.

The

wife, I have known two inſtances in this country, and children of the ſame parents; who had the one, brown, and the other, black hair.

The hair is whiter than that of any old people, or of any quadruped, as well as much ſofter; it, indeed, reſembles ſilk more than hair, and retains this texture through life. What is further remarkable is, that all children born with this kind of hair have eyes of as ſingular a colour, and that is, a pale red, or pink, which extends as well to the pupil, as over the iris. It may be remarked, by way of analogy, that ſome quadrupeds amongſt us, of a breed originally foreign, whoſe hair is perfectly white, have always eyes either of a fine blue, or of a pink colour; but in the *Albino* they are always red, which like the hair, is ſubject to no change.

THE END OF THE DISEASES,
AND OF VOL. II.

A

# TREATISE

ON

# THE DISEASES OF CHILDREN,

WITH DIRECTIONS

FOR

# THE MANAGEMENT OF INFANTS

FROM

# THE BIRTH.

By MICHAEL UNDERWOOD, M.D.

LICENTIATE IN MIDWIFERY

OF THE

Royal College of Physicians, in London,

PHYSICIAN to

*Her ROYAL HIGHNESS the PRINCESS of WALES,*

AND

SENIOR PHYSICIAN

*To the Britiſh Lying-in-Hoſpital.*

IN THREE VOLUMES.

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*Ornari Res ipſa negat, contenta doceri.* MANILL.

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## ERRATA.

Page 22, Line twenty, for may, r. many.
80, Line twenty, for implicity, r. implicitly.

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The Table of different Milks to be placed immediately after the Introduction.

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# PREFACE.

WHATEVER Splendour the actual Treatment of Diſeaſes may reflect on the Science of Medicine, it, by no means, comprehends the whole of its Province: for Prevention being in every caſe preferable to Remedies, the medical Art would be more imperfect than other Sciences, were it devoted only to the latter. In the management of Infants more eſpecially, ſuch a variety of other articles occurs ſubject to medical direction, that this work would

be peculiarly incomplete if confined merely to the Cure of Diſorders. In a view, therefore, to ſuch miſcellaneous matters, and certain recurring affections too trifling to be ranked as Diſeaſes, this volume is annexed; and it is hoped, may contain every thing on which the moſt Inexperienced can wiſh for information, without being tedious by enlarging upon trifles. In all matters of importance a becoming firmneſs has been adopted, but I have not equally inſiſted upon others, wherein the manners of a refined age cannot comply, nor have urged any peculiar modes which the Generality may not adopt. Should any opinion be more obſtinately maintained, it is, probably, in relation to the Aliment moſt adapted to new-born Infants; an article frequently alluded to in the following pages.

In a view to this, an *Introduction* is given on the Nature and Properties of Human-milk, as more eſpecially connected with the ſubject of this volume; which, it is hoped, will exhibit a Plan as rational in deſign, as the author is led to believe it has been ſucceſsful in its application.

# INTRODUCTION.

## ON THE PROPERTIES OF HUMAN-MILK.

IF facts are the baſis of ſound reaſoning and the ſource of improvements in ſcience, they will be aſſiduouſly cultivated by every inveſtigator of the laws of nature; perſuaded that, howſoever miſapplied for a ſeaſon, they muſt eventually confirm his maxims, or correct his miſtakes. In this perſuaſion, the author's attention has been awakened by ſeveral publications, but eſpecially by ſome later ob-

ſervations upon *Human-milk*, by Dr. CLARKE of *Dublin*.*

SUCH a ſubject, while it arreſts the ſpeculation of the natural philoſopher, will further claim the phyſician's attention in regard to the influence which the diet of infants muſt ever have on their health, eſpecially that nouriſhment which Nature herſelf hath, in every climate, provided for them, at their birth: for it is only from a due acquaintance with this, that Art is likely to ſupply the fitteſt ſubſtitute when the natural cannot be procured. Nor can the inquiry be deemed ſuperfluous in a treatiſe embracing both the means of prevention and cure of their diſeaſes, nor form an improper Introduction to this volume. And it being Dr. CLARKE's expreſs deſign to diſpute not only ſome of the ſuppoſed conſtituent

* Obſervations on the Properties commonly attributed to *Human-milk*; on the Changes it undergoes in Digeſtion, and the Diſeaſes ſuppoſed to originate from this Source in Infancy. *Tranſactions of the Royal Iriſh Academy*, *anno* 1786.

parts

parts and properties of *breaſt-milk*, and eſpecially that of any true curdy principle; but alſo various ill effects conceived to be produced by it in ſucking infants, and the means of relief; I ſeem to be compelled to take ſome notice of that work. Indeed, the ſpirit of inquiry manifeſted in the Eſſay is truly laudable, and the experiments ſet on foot are worthy the notice of every practitioner in medicine; not to add, that the eſtabliſhment of the fact,* whatever it may be, is likely to

* Dr. RUTTY, indeed, made the like experiments in the year 1762, and Profeſſor YOUNG ſince, though with a leſs decided opinion, from ſimilar reſults: and it is preſumed, that the experiments made in conſequence of the preſent inquiry, have ſet this matter in its true and proper light.

How to account for the difference of Opinion from the ſame experiments, or for their ſeemingly different reſults, conſiſtently with the honour of thoſe who profeſs to have made and reported them, with equal attention and integrity, may be leſs difficult, perhaps, than might be imagined. In regard to the principal point in debate however, I conceive, that ſome gentlemen have taken certain congelations for true

to become of general uſe; though practitioners, it is preſumed, will not readily agree with Dr. CLARKE in regard to the extent to which he carries his ſentiment, any more than in all the inferences he would draw from it.

INDEED, when his Obſervations fell in my way, I was, from the firſt, not a little ſurpriſed at the confidence with which he oppoſed a ſentiment almoſt univerſally adopted; and I determined aſſiduouſly to inveſtigate the matter for myſelf. For this, I knew I had opportunities equal to thoſe of Dr. CLARKE, and I pleaſed myſelf with the idea of being, at any rate, a certain gainer; as I ſhould, at leaſt, get at a fact which muſt in the reſult be

curd, without putting them to the proper teſt; whilſt others, from the like neglect, have overlooked ſmall portions of it, which have been blended with other matters; but eſpecially have too much neglected one obvious, though leſs common mode of diſcovering it; or in the few experiments they may have made in that way, have not allowed ſufficient time for the curd to form; as will hereafter appear.

favour-

favourable to my general purſuits. I muſt acknowledge, that I was inclined to ſuſpect the Doctor had been miſtaken in toto, until repeated experiments, by various means, and under a variety of circumſtances convinced me, that there is certainly much leſs curd in *human-milk* than had been commonly ſuppoſed, and that whatever the preciſe quantity might be, it is not very eaſily detected by runnets and acids; ſince in far the greater number of experiments made upon *freſh* milk, not the leaſt could be perceived, though in a few, I ſeemed to be ſatisfied at the time, that there was a ſmall portion of true curd.*

Surpriſed as I, indeed, was at the firſt reſult of theſe experiments, threatening the ſubverſion of an idea, which howſoever unfounded, had been but little ſuſpected; no ſooner did the eſſence of the fact ap-

* Mr. NAVIER long ago, and Dr. FERRIS in his *Harveyan* Diſſertation, at *Edin.* anno 1782, have adopted this ſentiment.

pear

pear to be eſtabliſhed, than my wonder not only ceaſed, but I conceived there was every reaſon to imagine that *human-milk* ſhould be very much of the nature Dr. CLARKE had ſuppoſed; though he ſhould over-rate, the reſult of his experiments, or his inferences be unfounded; as I have ſince proved to be the caſe. It may be ſuſpected, indeed, that a partiality for a mode of practice that myſelf and many others had long taken up, might naturally render me anxious to ſupport it at any rate, and to accommodate every fact to my prejudices. However this may be, I found that the attempt, in the preſent inſtance, required very little pains or application, and terminated in the perfect ſatisfaction of my own mind; ſince the like ſtubborn things (which are met with every day in the treatment of infants) cannot be accounted for but in the way I have all along done; and muſt evidently demonſtrate the exiſtence of an *acid* in the firſt-paſſages of infants, of what *nature* ſoever the food may be

be on which they are ſupported. How this attempt was executed is now of very little importance to lay before the reader, ſince the mode and number of experiments I have ſince made on *human-milk*, prove to a demonſtration the conſtant preſence of curdy or true cheeſy principles, and muſt therefore totally ſubvert the principal arguments and inferences of Dr. CLARKE, were they much more ſpecious than they are. I ſhall therefore enter no further into ſuch arguments wherewith a long experience has furniſhed me, reſpecting the tendency to acidity in the firſt-paſſages of infants, (which became ſo neceſſary upon the ſuppoſition of there being *no* curdy principles in human-milk,) than the acknowledged ſmall proportion of true curd may ſeem to demand; though, (as above hinted) theſe might be ſufficient to prove the point, were there even no curd at all to be diſcovered in *human-milk*. The ſmallneſs of its proportion, however, with the reſiſtance it offers to acids, as juſtly ſtated by Dr. CLARKE, is ſtill in

my

my opinion as agreeable to reaſon, as the experiments upon which the ſentiment is founded appear to be concluſive.

MANKIND, during infancy, is certainly amongſt the moſt feeble of all animals that are nouriſhed in the like mode by the parent, and is liable to more complaints, eſpecially to diſorders of the alimentary canal. It is reaſonable, therefore, to conceive, that his aliment ſhould be of the moſt eaſy digeſtion, light, thin, and very nutricious; at once affording as little labour to the ſtomach as poſſible, and eaſily convertible into chyle, or blood. We accordingly find *human-milk*, though very thin, exceedingly nutricious, owing to the great proportion of the fat or buttery part, and of a ſaccharine whey, with which it abounds. It is alſo eaſier of digeſtion than moſt other milks, owing to the ſmaller quantity of curd it contains;* which, while it is leſs nutricious than

* *Aſſes-milk* appears to have leſs curdy principles than any other milk I have analized.

the

the other parts, is alſo much more difficultly digeſted, or converted into chyle. And this I am now perſuaded is really the caſe; *human-milk* certainly contains leſs curd than moſt other milks; and the public is much indebted to the reſearches of Dr. CLARKE, as far as they may have led to the eſtabliſhment of this fact: but let us be careful that we do not draw as unjuſt inferences from truth, as have been ſuppoſed to ariſe from error.*

For does it follow, that if a theory be ſomewiſe erroneous, our practice muſt neceſſarily be wrong? I think not; being perſuaded that experience, and the cloſeſt attention to facts, will confirm the general mode of practice enforced in the ſeveral editions of this work, and in ſome part before recommended by HARRIS and

* I am ſorry to find Dr. CLARKE expreſſing a ſuſpicion that his opinion may not be readily embraced by other phyſicians. There are, doubtleſs, many who are glad to collect facts from any quarter, and to entertain truth in every form; and ſuch will always be open to every well ſupported inference from them.

his

his followers. Let us, however, conſider the arguments and inferences alledged by Dr. CLARKE againſt the hypotheſis of a prevailing acidity in infants, and noxious coagulation of the milk,* which writers on their complaints have uniformly eſtabliſhed; and contrary to Dr. CLARKE, conceive to be a principal ſource of their complaints.

Not that they attribute almoſt all the diſeaſes and fatality amongſt infants to that ſource *alone*, as Dr. CLARKE has imagined; who does not allow due weight to other co-operative circumſtances they

* By the term coagulation, or curdy matters, made uſe of in this and other places, it is not meant to aſſert, that the milk always ſeparates into proper curd; it having been granted, that although it certainly does contain true curd, it is not ſo readily ſeparated by acids (out of the body) as the curd of quadrupeds is; but as human-milk abounds with an oily or buttery part, it is diſpoſed to jelly or coagulate into a pretty firm maſs offenſive to an infant's ſtomach. And this kind of coagulation alſo takes place out of the ſtomach, from an admixture of an acid with human-milk, equally as with cows.

mention,

mention, conſidering them merely as prediſponent cauſes; particularly the extreme delicacy of their frame. For it is certainly through this extreme delicacy, that infants ſink under complaints, which to adults are commonly little more than inconveniences, and prove in ſome reſpects an advantage, by exempting ſuch habits from the more dangerous diſorders of athletics.*

The atony of infants, therefore, whilſt it is a prediſponent cauſe, proves likewiſe an occaſion of the ſeverity of their complaints, and of the great fatality attending them; and this fatality ariſes from diſorders of the ſtomach and alimentary canal: for how very few infants die in the firſt months, in whom theſe parts are not, both at *firſt and laſt*, the evident ſeat of the diſeaſe; and with what difficulty are many others preſerved from ſimilar complaints, eſpecially children brought up by hand?

* *Acidum eructantes non ſunt pleuritici.* HIPPOC.

BUT

BUT I proceed to the particulars ſtated by Dr. CLARKE; who having purſued this important ſubject at ſome length, and given his arguments every due advantage, I beg leave to beſpeak the reader's pardon, if in following him through it, I ſhould ſeem diffuſe, if not tautological, in purpoſely ſtating diverſified views of facts, in order more clearly to exhibit their decided reſult.

THE firſt Obſervation of Dr. CLARKE that I ſhall notice, regards the fact in queſtion, and upon which he grounds his objections both to the concurrent ſentiments and practice of writers on the diſeaſes of infants.

"Women's milk, (ſays Dr. CLARKE) in a healthy ſtate, contains no coagulable, mucilaginous, or cheeſy principles, or that it contains ſo very little as not to admit of ſenſible proof."

COAGULATING principles, unleſs that term be uſed in a very preciſe and limited ſenſe, every nurſe muſt have frequently obſerved, at leaſt in their effects; ſince large

large flakes frequently appear in the matters thrown up from the ſtomach of unhealthy infants. Whether theſe congelations be owing to ſome ſmall portions of curd, or cheeſy principle the milk certainly contains, (which may poſſibly be too ſmall to account for their frequency and quantity;) or to an oil, fat, or butter, is not of importance to the fact. For *human-milk* certainly contains a much larger proportion of cream, or fat, than cow's milk does, as is evident both from the natural, as well as an artificial ſeparation of it by different kinds of acids. And perhaps this, as I ſhall have occaſion to remark, might ſerve to account for the ſymptoms of acidity, and the rancid and acid matter ſo prevalent in infants, and for the various effects of abſorbent, alcaline, and lightly cordial remedies, without a reference to any *true curdy principles* in *human-milk*; which it is preſumed, however, Dr. CLARKE in this place preciſely intends.

I proceed, therefore, to obſerve, that the aſſertion of Dr. CLARKE as to this great point in queſtion, is, in no view, ſtrictly juſt; ſince it is inſiſted, that there certainly is a portion of true curd in human-milk; which as Dr. YOUNG has remarked, ſeparates ſpontaneouſly. Dr. CLARKE in his remark upon this obſervation, I know not why, concludes that it is ſtated by Dr. YOUNG merely as "matter of opinion, and not the reſult of any experiment." Nothing further, however, is neceſſary than *to make it*, and to wait a ſufficient time for the reſult; no particular degree of heat being neceſſary, though ſo ſtated by Dr. YOUNG. But whence it is, that runnets, acids, and ſpirits do not always ſeparate any very ſenſible quantity of this curd in the courſe of eight and forty hours, as they conſtantly do from cow's milk, and wherefore a much longer time ſeems to be neceſſary for its ſpontaneous ſeparation, I am not chymiſt enough to offer any

any opinion, and therefore confine myſelf to the fact: obſerving, however, that this peculiarity is, doubtleſs, to anſwer ſome wiſe purpoſe, and very probably, may be a principal reaſon of women's-milk agreeing ſo much better with infants, than the milk of every other animal; and it is hoped, may in time furniſh ſome very uſeful practical obſervations.

DR. CLARKE's next Obſervation relates to the time, in which human-milk becomes ſour: upon which he remarks thus.

"IF we find *human-milk* out of the body ſo very ſlow in running into an aceſcent ſtate, does it not afford ſtrong preſumptive evidence, that the milk of nurſes cannot be ſo very prone to run into acidity in the ſtomach of infants as authors endeavour to perſuade us?"

To this it may be replied, that though human-milk, out of the body, does not, indeed, run into an aceſcent ſtate ſo ſoon as cows milk does, (and for the full eſtabliſhment of this fact we are much in-

debted to Dr. CLARKE;) yet I think, that *Experience*, (which muſt be allowed to be full as good evidence as any *Experiments* can be) as fully demonſtrates, that like many other milks, and moſt vegetables, it is much more diſpoſed to occaſion acidity in the ſtomach, than food prepared from pure animal juices. Moreover, it is not uſually ſo ſlow in acquiring an evident acidity, even out of the body, as might be conceived from ſome experiments Dr. CLARKE has induſtriouſly made, and I doubt not as fairly reported; for at the end of four days, and even ſooner, I have ſometimes met with it full as ſour to the taſte as cows milk, kept the ſame length of time, though this is not uſually the caſe;* and when become putrid (by that teſt) which I have known it to be in ten days, it has been equally ſo with cows-milk.† And ſurely it is not ima-

* Dr. CLARKE alſo takes notice of a variety in this reſpect.

† It is worthy of remark, that ſo far from *human-milk* being *uſually* indiſpoſed to be much changed by long

imagined, that human, or any other milk, remains on the ſtomach long enough to become acid from that ſpontaneous ſeparation of parts which takes place in the dairy; and therefore the queſtion is not ſo much, in what *time* it will become acid, as to what *degree*, or by what *means*, this change may be effected: and in theſe reſpects, it is found to differ little from the milk of quadrupeds. For though runnets and acids do not always ſeparate true curd in any ſenſible quantity from breaſt-milk, *out* of the body; yet ſuch curd being found in the pukings of infants when moſt vexed with acidity, (as

long keeping, as Dr. CLARKE has obſerved, it has not only always become putrid before I have thrown it away; but that about three quarters of a pint which I kept (in a baſin) at the hoſpital, only a fortnight, for the purpoſe of collecting the curd by a ſpontaneous ſeparation, had rendered the room, for more than a week, ſenſibly offenſive to every one who entered it; but was ſo very fetid when I ſtrained it off, that the matron who aſſiſted me, being leſs accuſtomed to putrid effluvia than I have been, was diſguſted by it exceedingly.

will be ſtated in its place) ſeems to demonſtrate the *means* of its ſeparation, as well as the *fact* and *degree*.

DR. CLARKE, indeed, ſpeaks of human-milk kept in a phial for more than two years, at the end of which time it was become only moderately acid; whereas I have often found it very ſour, according to his own criteria with ſtained paper, in four or five days; ſo that one would be led to ſuſpect, that like putrid waters, the milk muſt have depurated itſelf by ſome kind of fermentation. And though it was rather ludicrouſly that this idea firſt occurred to my mind, I have been ſince diſpoſed to think, that both human and other milks, when preſerved from the air, are capable of ſuch changes; having obſerved both women's and cows milk, at the end of may weeks, become entirely without taſte or odour.* The latter

*. In further vindication of the above ſentiments, the author may, at leaſt, offer the following ſtatement; for the accuracy of which the reader's implicit credit is

latter kept on my mantle-piece, over a large fire, has not been fetid at the end of

is requeſted. It reſpects ſeveral portions of *human* and *cows* milk, with obſervations on their changes taken preciſely as dated below.

On one portion, preſerved in a phial, and well corked, it is noted—

Human-milk, procured, Nov. 22, 1790.
Nov. 25 Now, rather tart to the *taſte*.
26 very four.
27 not fetid to the *taſte*.
28 *ſmells* very fetid.
29 fetid *taſte*.
1791, Janry. 1. *very* fetid, now.

I examined this milk juſt before this volume went to the preſs, (in March 1795, not having noticed it before for near a twelvemonth;) and found it turned of a dirty brown colour, and *ſmelling* exceedingly *fetid*.

Another portion of *human* milk, procured within a few days of the above-mentioned, and preſerved in a phial, no better corked, did not at this time *ſmell* at all *fetid*, nor diſagreeably *acid*, although it had ſo ſmelt and taſted, a long time before; was not changed in its colour like the former, but ſeemed merely to have undergone the natural ſeparation into curd and whey.

(I carefully examined theſe two portions of milk, Nov. 11th 1797; and found them in nowiſe changed ſince the former examination in March 1795.)

of five days, and was by no means more offenſively acid to the taſte, than I have known human-milk become in four days. And it is further worthy of remark, that out of ſeveral parcels of human-milk, preſerved under preciſely ſimilar circum-

(While this work was in the preſs May 1799, I examined theſe portions again, and could be ſenſible of no change.)

A portion of *cows* milk drawn a month after the firſt-mentioned, I found at this time (March 1795) changed exactly in like manner in its colour, and decidedly more offenſively *fetid* in *ſmell*.

(This portion on the 11th Nov. 1797, was ſtill moſt decidedly more offenſively *fetid* in *ſmell* than the *human-milk*.) (May 1799, it was in the ſame ſtate.)

*Human-milk* drawn a few days after the *cows*, was at the ſame time found preſerving its colour, having only ſeparated into curd and whey, and without the leaſt *acid*, or *putrid ſmell*, and having no more acid *taſte* than *cows-milk*, drawn in ſummer, uſually has on the ſecond day; nor was there any noiſe nor fermentation to be perceived from haſtily drawing out the cork, as there was from both the *human* and *cows* milks which had changed their colour.

(On Nov. 11th 1797, this portion alſo continued in the ſtate above deſcribed.) (And in May 1799, it was nowiſe changed.)

ſtances,

ſtances, ſome became very ſour and even putrid to the taſte, ſeveral days before the others ſeemed to be at all changed. And as this variety occurred under repeated experiments, it may aſſiſt in accounting both for the frequency of bowel complaints in ſome ſucking infants which other children are free from, and for the frequent good or bad effects of a change of milk, whether occaſional or more permanent: and has not every phyſician of experience ſeen infants frequently thrown into tormina immediately after coming from the breaſt of an unhealthy mother, or one who has but little milk?

IN regard to the means by which this aceſcency may be produced, we know very well, how very ſmall a portion of the prepared calf's ſtomach is requiſite for making ſufficient runnet to ſeparate the curd from a large quantity of milk, and communicate aceſcency to the whey; and is it at all improbable, that the infantile gaſtric juices, aſſiſted by the natural action of the ſtomach, by ſurrounding and mixing

mixing with the milk in every point, may operate much more powerfully upon it, and diſpoſe it to become ſo ſour and curdy,* as to offend that organ, if it ſhould not ſoon paſs into the inteſtines;† as it is preſumed it ought always to do. Moreover, acidity ſeems to be one of the ſtates into which all animal and vegetable ſubſtances naturally, or very frequently run,‡ in the courſe of digeſtion or fermentation,

* It is elſewhere obſerved, that the ſeparation of the curd from the whey is the natural proceſs of digeſtion.

† In proof of the powerful operation of the gaſtric juices, while in the ſtomach, I may here advert to the well-known fact of that viſcus being frequently found corroded a few hours after death, (as I have myſelf ſeen it;) and I imagine, it is generally, though not univerſally, believed in this day, that the corroſion has taken place ſubſequent thereto, and that the gaſtric juices have only acted upon that part, as they would upon any other animal ſubſtance diveſted of the vital principle.

‡ Perhaps this may not be the proper and natural courſe of digeſtion, as Dr. GEORGE FORDYCE has taken great pains to demonſtrate; yet are the firſt-paſſages in moſt people ſo diſpoſed at times, that through

mentation, equally conſtantly with that putridity, or fetor, which precedes their diſſolution, or ſeparation into firſt principles; and therefore in a certain degree, probably ought to take place in the ſtomach or ſmall inteſtines, as the fetor does in the lower bowels. The latter is never ſo great in infants as it is in older ſubjects, though adults ſhould for a time live only on a vegetable or milk diet. A principal reaſon, probably, is, that the bile is weaker in infants; but being at the ſame time a leſs powerful corrector of acidity, it is likely, they may be, on that account, more diſpoſed to the latter; and, perhaps, ought to be. Nor can I ſee, wherefore that very probable evidence of an abundant acidity in the firſt-paſſages of infants ariſing from the very ſour ſmell, and curdy appearance of both the

through indigeſtion, acid matters are very commonly formed. And it is worthy of remark, that the late Mr. JOHN HUNTER always found the gaſtric juices lightly acid in every healthy animal that he examined.

vomit-

vomitings and ſtools of many infants, and the *uniform relief* afforded them by a proper uſe of *abſorbent* and *alkaline remedies*, ſhould not have much more weight in the argument, than can be brought againſt it from experiments made on human-milk, out of the body, and its acknowledged indiſpoſedneſs to turn ſour ſo ſoon as cows-milk: for we know, with what extreme caution we ought to apply both chemical and phyſiological experiments to the explanation of the phenomena of diſeaſes. Not to inſiſt again in this place upon the idea already ſuggeſted, that breaſt-milk is not ſuppoſed to remain long enough on the ſtomach to ſeparate into curd ſpontaneouſly, in the manner of cows-milk kept in a dairy; it is ſufficient to advert to facts, both the ſmell and curdy appearance mentioned above, and the relief afforded by medicine, being exactly alike in all indiſpoſed ſucking-infants, as in children who are brought up by hand, although the latter are, indeed, more frequently

afflicted

afflicted with ſuch bowel complaints. The great difficulty alſo of adapting food to infants brought up by hand; and the frequent recurrence of all the ordinary ſymptoms of indigeſtion, with the relief frequently afforded them by broths; may ſerve to ſtrengthen the idea of a diſpoſition in the firſt-paſſages to generate wind and acidity in the digeſtion of their food, and to coagulate every kind of aliment capable of coagulation by the gaſtric juices, eſpecially if not in their moſt natural or healthy ſtate.

BUT as ſo much of Dr. CLARKE's argument turns upon there being very little or no *curd* in human-milk, it may be aſked, is it, indeed, a certain fact, that the flaky matters brought off the ſtomach of infants nouriſhed by cows-milk, is uſually *proper curd*, any more than that ejected by children nouriſhed at the breaſt? for it is poſſible it may be the fat, or buttery part, or only a very ſmall portion of proper curd, in the one caſe as well as the other: and if ſo, the whole force of the

the Doctor's arguments, and his conſequent objections to the popular plan of treatment may, poſſibly, fall to the ground; for the ſymptoms, complaints and remedies, in both caſes, it has been ſaid, are the ſame, and are well accounted for by a ſuppoſed prevalent acidity in the firſt-paſſages, and a proneneſs of their contents to be, in ſome ſort, curdled by it.* Of the former I have inconteſtible proofs in ſeveral inſtances, in the pukings of infants nouriſhed only by breaſt-milk, which changed blue-paper red, upon being applied to it the moment they were brought off the ſtomach.

For the like certain detection of true curd, I endeavoured for ſome time to-

* That the acid of the ſtomach is capable of forming *proper curd* I have no doubt, having noticed it frequently, and, indeed, having now by me, preſerved in ſpirits, a portion of above an inch in length, and half an inch in thickneſs, which was many years ago puked up by an infant I was attending; but whether the child was brought up by hand, or not, I do not now at all recollect.—While the preſent edition was in the preſs, another little patient threw up a like piece.

gether

gether to make experiments at the hoſpital, upon the pukings of infants nouriſhed only at the breaſt; but either the nurſes there did not attend ſufficiently to it, or the quantity they could preſerve was always too ſmall, or too much blended with other matters to aſcertain, with preciſion, whether they contained any true curd or not. But ſince that time an opportunity preſented in private practice, in an infant who I was well aſſured was nouriſhed only by the breaſt. Having ſucked very plentifully, the child became ſick, and throwing up a mouthful of ſtrong curd, I took up a lump of it, about the ſize of a nutmeg, which adhered together firmly, and was pretty free from other matters; leaving behind in the baſin a larger quantity divided into ſmall portions, and too much entangled with a viſcid phlegm to anſwer my purpoſe. The portion I took out, together with ſome ſlimy matter adhering to it, weighed twenty grains, and when ſeparated from every thing that could

could be ſqueezed from it, or evaporated by heat, exhibited one grain of hard, caſeous matter, which expoſed to the flame of a candle, burned, and ſmelt like coarſe cheeſe; but being before diveſted of all its oil or butter, was incapable of being melted. And according to ſimilar experiments made upon human-curd, dried in different degrees, I imagine that the above mentioned portion, previous to its being reduced to the conſiſtence of hard cheeſe, might contain ſix or eight grains of ſoft curd.

I THINK this may be conſidered as a deciſive proof, that the gaſtric juice can ſeparate curd from breaſt-milk in the ſtomach of infants, and I believe is no uncommon thing;* nor was it

* By this mean, as I have elſewhere remarked, that in the ordinary courſe of digeſtion, the thicker parts are always ſeparated from the whey; but as breaſt-milk abounds with oil or butter, the viſcid matters thrown up often appear more like clotted-cream than true curd: nevertheleſs, either from the milk remaining for an undue time in the ſtomach; or from an exceſs

it long before I met with another inſtance equally ſatisfactory. This infant at eight months old was attacked with ſevere peripneumonic ſymptoms, which were at that time epidemic among children; and ſeveral times threw up curdy matters ſoon after taking the breaſt, which was its only nouriſhment. The nurſe twice preſerved the cloth upon which they had been received, from which I ſcraped them, and after properly preſſing and drying them, I found, that about the one third part turned out to be pure caſeous matter,

ceſs of acidity; or perhaps other circumſtances concerned in digeſtion not always known to us, the ſeparation of the component parts becomes ſometimes more complete, and true curd appears. How far this may be owing to infants being in an ill-ſtate of health, to fever in particular; or ſimply to weak digeſtive powers, and a depraved ſtate of the gaſtric juice; time and attention to their complaints may poſſibly diſcover: but at preſent I am inclined to think, that the gaſtric juices, (which are at all times lightly acid,) always poſſeſs this property, as they certainly do of ſeparating the curdy part of *cows* milk, if it ſhould happen to ſtay a ſufficient time on the ſtomach. This we alſo know to be the caſe with many adults.

burning in a candle, and inſoluble like the former; and in this hard and dry form, weighed a grain and a half.*

Now, if by the above, and other arguments and facts, it ſhould appear, that human-milk, from whatever cauſe, does actually become ſour and curdy, in different ways, and that infants are frequently injured by it; the leſs diſpoſed thereto it may naturally be, the more we may, indeed, be led to admire the wiſdom of Providence, that Women's milk ſhould, in that reſpect, differ from the milk of many other animals; yet mere preſumptive evidence againſt its frequently turning ſour, in the ſtomach of infants, cannot invalidate the fact.

Dr. CLARKE himſelf, indeed, ſeems to be aware that there may be reaſons for ſuch a ſuppoſition, and therefore ſays,

* My reaſon for evaporating the ſoft parts of the curdy matter ſo completely, by expoſure to a ſtrong heat; was to demonſtrate beyond all doubt that it contained *true curd*, by bringing it to the ſtate of the coarſeſt kind of cheeſe, in which there is no oil or butter.

" In

"In the adult ſtate, we know that there are few morbid cauſes leſs noxious to the human body than acidity, and few more ſubject to the controul of medicine."

THIS poſition though in a certain ſenſe, a very fair one, is not wholly ſo, when taken with all the inferences which Dr. CLARKE would deduce from it: for if the acidity be very great, and the cauſe permanent, (as is ſometimes the caſe) though alkalis may be adminiſtered in ſufficient quantity to neutralize the acid; the acidity returns again, and prevails even for years, in ſpite of the uſe of every kind of alkali, of columba-root, bark, ſteel and other tonics, unleſs the ſtate of the ſtomach be changed by them, and the digeſtive powers ſtrengthened. Indigeſtion naturally produces acidity, and is increaſed by it, as we ſee in many pregnant women, and in various affections of the ſtomach, particularly when it is diſeaſed in a morbid way.—A gentleman who died of a ſchirrhus in the ſtomach, which I after-

wards examined, was tormented for the laſt ſix months of his life, with an inceſſant acidity, which though often relieved, eſpecially at the beginning, by magneſia, aqua kali, natron ppt. and other ſimilar remedies, was never for one hour entirely removed; ſo that he ſpat up acid matters all the day long, and died, after a very tedious illneſs, perfectly emaciated, though he took a ſufficient quantity of food of different kinds.

Dr. CLARKE goes on to make further conceſſions.

"But granting (ſays he) ſuch acidity to prevail in infants, we are in poſſeſſion of many harmleſs medicines (called abſorbents) capable of neutralizing acids, and thus forming innocent *compounds*."

WE have, indeed, many *uſeful* remedies in ſuch caſes, but none that will certainly remove the complaint, either in infants or adults, until the ſtate of the ſtomach be changed; which in infants is often effected by time. For comparatively light as the evils of a diſpoſition

to

to acidity moſt certainly are, when it is light or tranſient, it becomes even in adults a ſource of manifold infirmities, when depending upon ſome permanent cauſe, as has been above ſtated, which cannot fail occaſioning an almoſt daily return of every troubleſome ſymptom. A viſcid phlegm alſo, inſtead of a harmleſs compound, often reſults from the alkaline remedies and natural acid, (commixed, as they may be with other heterogeneous matter) which though inſipid, is very indigeſtible; and at other times, a more offenſive acrid matter is formed in the ſtomach of many adults, and is with difficulty got rid of where the digeſtion is weak; and is continually adding to the complaint. Every practitioner muſt have met with many ſuch caſes; and from one more immediately under my eye, whereby I was for a long time witneſs to the effect of an atonic ſtate of the ſtomach, I can ſpeak very confidently to this point. This patient was of a ſpare, and delicate habit, very ſober, and re-

markably free from almoſt every complaint, but thoſe immediately ariſing from a weak ſtomach, as it is called. This ſenſible organ, however, was eaſily put out of order, eſpecially by vegetables, milk, and ſimilar things diſpoſed to generate wind or aceſcency in their digeſtion, and was at ſuch times loaded with acidity; which though often corrected by alkalis and abſorbents, the ſtomach would, at other times, eject matters in ſo very acrid a ſtate as would inſtantly render the fauces of a deep ſcarlet hue, produce ſoreneſs of the throat, falling of the palatum molle, exceſſive hoarſeneſs, and ſome difficulty in ſwallowing, which would remain for many hours. After long vomiting, a bitter matter would come up, ſometimes of a light, at others, of a deep green colour; but rarely yellow, though evidently bilious. Sometimes, upon taking alkalis and abſorbents previouſly to vomiting, the acid would be neutralized, at others, no quantity would render the juices bland; but inſtead of an acid, a heavy, acrid,

and

and moſt viſcid phlegm would be ejected, inflaming or flaying the fauces, in the manner juſt mentioned, and in this ſtate no kind of medicine had any good effect; though previous to the *acid* matter being changed into this *acrid* ſtate, alkalis and abſorbents very frequently prevented vomiting; which, however, nothing could do after the contents of the ſtomach loſt their *acidity*, and became *acrid:* ſo far were they from being uſually converted into a *harmleſs compound.* It was only after being many years tormented in this way, and having daily recourſe to alkaline and abſorbent remedies, columba and bark, joined with ſteel, and other powerful tonics, with exerciſe and a ſcrupulous attention to his diet, that he was ſenſible of any abiding amendment;* though from the great benefit he at length received, by a ſtrict adherence to ſuch a plan, it may be preſumed he had no morbid af-

* This, perhaps, might be further promoted, by his becoming now full forty years of age.

fection of the ſtomach, though that had been often ſuſpected.

Exceſs of acidity, and an acrid, ropy phlegm are, indeed, the well known attendants on an imperfect digeſtion, and will recur in many adults, feed on whatever they may;* though the evil muſt, doubtleſs, be increaſed by certain kinds of aliments; and of that claſs are thoſe adminiſtered to infants. If adults, therefore of a ſimilar habit to that juſt now ſtated, though in the end often reſtored to perfect health, may continue for a long time greatly tormented, whilſt the moſt powerful correctors of acidity, and known

* I conceive, that this habitual acid affords a too great, and improper ſtimulus to the glands of the ſtomach, exciting both a ſuperabundant and morbid ſecretion. By this means, the gaſtric juice is oftentimes rendered exceedingly viſcid, (in the manner of the ſecretion from SNEIDER's membrane from the ſtimulus of a cold) or afterwards becomes thus tenacious from mixing with the acid, and ill-digeſted contents of the ſtomach. This ſeems probable, from the vaſt quantities of this viſcid and acrid matter which, it has been obſerved, people long vexed with acidity will ſometimes throw off the ſtomach for hours together, and frequently for ſeveral ſucceſſive days.

tonics

tonics are had recourſe to; and if improper food be occaſionally received into the ſtomach, their complaints will at ſuch times be greatly exaſperated; wherefore ſhould it be ſuppoſed, that delicate infants muſt always be reſtored, if the breaſt-milk, as well as other nutriments on which they may feed, be confeſſedly, to a certain degree, diſpoſed to add to the complaint? And can it be urged from any experiments made on human-milk, or will Dr. CLARKE or others affirm, that it is ſo utterly unlike every other milk, and even ſo much more ant-acid than animal food, that it has nothing in it likely to become ſour (ſave in very weakly children) by an admixture with the gaſtric juice?

I NOW proceed to Dr. CLARKE's remarks reſpecting the green colour ſometimes obſerved in infants ſtools. Dr. CLARKE doubts of the exiſtence of the ſuppoſed predominant acid, of which that colour has been imagined to afford ſome evidence, becauſe, he ſays, common acids do not give that tinge to the bile, and that

that only mineral acids give it a green colour.

But as *ſome* kinds of acids can produce this effect, it cannot ſurely be proved, that the natural acid of the ſtomach and bowels cannot effect the like; eſpecially when it is conſidered, that in adult perſons affected with dyſpepſia, *bitter* matters of a *green* colour are frequently ejected after very acid vomitings, as it has juſt now been remarked. And though as Dr. CLARKE obſerves in a quotation from SYDENHAM, "porraceous matters are ejected by children who have been over-purged or vomited, and by healthy adult perſons when ſea-ſick," yet the like appearances under ſuch circumſtances can ſcarcely deſtroy the concluſion; ſince all ſuch violent agitations of the chylopoëtic viſcera, by diſordering and perverting their due and natural action, upon which the ſane ſtate of their ſecretions indubitably depends, may ſufficiently account for the ſudden forming of acid, acrid, or any other unnatu-

ral

ral and unhealthy gaſtric juice, as well as for the vomiting up of bile, which in its paſſage will certainly be mixed with it, and be ſomewiſe changed from its natural colour. And, indeed, SYDENHAM's reaſoning upon this ſubject, a little further on, is of a ſimilar kind, though expreſſing himſelf in the language of that day, he attributes this foreign, or morbid ſecretion, to a confuſion of the animal ſpirits; which, indeed, for any thing I know, may be a remote cauſe of it. It ſhould likewiſe be conſidered, that it is during the time that infants appear to be affected by a predominant acid in the firſt-paſſages, that the dejections and vomitings are of this green colour. Upon the whole, therefore, the prevalently ſour ſmell of ſome infants ſtools, which Dr. CLARKE thinks ſo very nugatory an argument, ſeems to afford much better evidence of the preſence of an acid, than his arguments can be againſt the change of colour by ſuch a mean. Moreover, I may affirm, that the *green* ſtools of ſucking infants,

infants, and even ſome ſtools that are of a bright *yellow* colour, do certainly contain an acid, having detected it under repeated experiments made with blue paper, the inſtant the ſtools have come away;* however it might turn out in the experiments made by Dr. CLARKE. And I may therefore, poſſibly, be allowed in my turn, to expreſs ſome ſurpriſe at the confident manner in which Dr. CLARKE has taken upon him to diſpute the fact.

BUT Dr. CLARKE obſerves further, that, "Thoſe writers who have laid the greateſt ſtreſs on ſuch appearances in infancy, do not pretend to apply the information to be derived from thence to the treatment of the diſeaſes of adults."

I, probably, do not fully comprehend the import of this obſervation; for the information, *mutatis mutandis* is moſt certainly applicable, and the complaints of each ariſing from acidity are capable of

* Theſe experiments were made before witneſſes at the *Britiſh Lying-in hoſpital.*

cure

cure or relief, in the ſame way, viz. by alkalis, tonics, and aromatics, with a well adjuſted diet. I have intimated, that the doctrine is *partially* applicable, becauſe the bile of adults being more exalted and acrid, or otherwiſe ſtronger, (if I may ſo ſpeak) may not upon meeting with the like acid, change their ſtools juſt to the ſame colour of thoſe of infants; nevertheleſs, the ſtools of adult perſons, tormented with acidity, eſpecially under peculiar aggravations, are of a much *paler* colour, than thoſe of people of much ſtronger digeſtive powers, and poſſibly, through a deficiency of bile. And here it may not be improper to conſider the very material circumſtance of the very different diet to which adults are addicted, as well as the medicines they may take, which, it is well known, often affect the colour and ſmell both of the ſtools and urine in the courſe of a few hours, as the ſtools of infants (though ever ſo green before) are changed in their colour upon taking rhubarb, ſaf-

fron,

fron, and ſimilar medicines;* while the diet of infants being perfectly ſimple, the contents of the bowels are likely to acquire no other colour than that of the bile itſelf, (as is actually the caſe in a healthy child) or ſuch as through their accidental property may be chemically induced by the admixture. Not to add, that the urine in healthy adults is uſually of a much deeper colour than that of infants, and is alſo not unfrequently occaſioned by a certain diet as well as by medicines; and varies with them. And perhaps it may be from a ſimilar natural tendency to a very *dark* colour, that we find the firſt ſtools of new-born infants are not truly green, though often of a *greeniſh-black*; nevertheleſs, there is ſufficient acidity in their gaſtric juices to occaſion the ſtools voided previous to in-

* Spinnage and other things impart their colour to the ſtools of young children, in a way they do not to healthy adults; and perhaps, from their digeſtive powers being weaker.

fants

ſants taking any kind of food, to tinge blue paper red, (as I have found by careful experiments) though ſuch ſtools contain a very large proportion of bile.

THESE obſervations, it is imagined, may apply to Dr. CLARKE's remarks in regard to the colour of the ſtools of adult perſons, vexed with acidity, which he ſays are not of a green colour like thoſe of infants. And in reſpect to ejections from the ſtomach when ſo tinged, it ſeems to have been a conſtant remark, that bile lodged there has been diluted by an acid; to both of which, phyſicians are in the habit of adminiſtering their appropriate remedies.

DOCTOR CLARKE goes on to ſay,

" Upon the whole, I hope it will appear probable to the generality of readers, that predominant acidity in the firſt-paſſages, is by no means ſo general, as to be conſidered as the only, or even principal ſource of infantile diſorders; that ſuch a morbid cauſe may now and then occur in infancy, as in adult age, from a weak-

weakneſs of the ſtomach, coſtiveneſs, or improper food, can admit of no doubt."

THIS inference is ſurely far from being made out from all that has been advanced.—But let us conſider of what the arguments conſiſt. "Human-milk out of the body, does not turn acid ſo ſoon as cows-milk does," (but cows-milk requires twenty-four hours or more;) "nor the common acids curdling the milk of quadrupeds produce ſcarce any ſenſible curd from human-milk; that only mineral acids will tinge the bile of a green colour; and that in the adult ſtate few morbid cauſes are leſs noxious than acidity, or more under the controul of medicine." To conclude from hence, that acidity in the firſt-paſſages ought not to be conſidered as ſo general a cauſe of infantile complaints, or to be of ſuch dangerous conſequence as it may uſually have been imagined, does not appear to me to be perfectly founded; nor to be evidence ſufficient to ſubvert the arguments and evidence adduced in ſupport of that ſentiment,

timent, in connexion with the acknowledged atony of infants. It is true, indeed, that *ex nihilo nihil fit*.—If there be no curdy principles in human-milk, no ſpecies of acid in the ſtomach can bring curd out of it; yet may the combination of an acid and milk offend the ſtomach otherwiſe. It has been obſerved, that all common vegetables, and even bread, are often very imperfectly digeſted by adult perſons with a ſtomach overcharged with acidity, yet is no part of ſuch aliment neceſſarily converted into any thing like *true curd*; though the ſtomach in all ſuch perſons is as certainly offended by the *curdling* of cows-milk.

Nevertheleſs, I have hinted long ago,* that ſimple acidity may not, in the firſt inſtance, or in a general way, be neceſſarily ſo injurious as ſome writers have contended, and that infants ſuffer more ſeverely from an acrid matter, (leſs capable of correction by abſorbents, than by

* In the very firſt edition of the ſubſequent Tract.

aromatics,) which though it originates from a predominant acid, generally becomes ſo very offenſive in conjunction with ſome other cauſe, be that a peculiar atony, or otherwiſe; robuſt children being always far leſs diſordered, though not wholly free from ſome of the vexatious ſymptoms of acidity. Upon the whole, however, I am perſuaded, that acidity is eventually a frequent ſource of miſchief, and that becauſe it is ſo conſtant a conſequence, and further aggravation, of indigeſtion, in ſuch adults as have what is called a weak ſtomach. For it is, perhaps, only in adults of a lax fibre, approaching to the atony of infants, and not in athletics, that we meet with that morbid ſource which Dr. CLARKE obſerves ſometimes occurs in adult perſons. And if the ſtomach, or digeſtion of infants be naturally weak, why ſhould we not expect to find them peculiarly liable to acidity and its conſequences? the ſtate of the ſtomach being certainly the grand ſource of general good, or bad health, at every age.

And,

And, indeed, were I to ſay no more than that infants, in proportion to the greater weakneſs of their digeſtion, muſt be more diſpoſed to acidity than adults, with many of whom a milk diet *always* diſagrees, (and is the infants' only nouriſhment) it were ſaying a great deal towards ſubverting the whole that has been advanced by Dr. CLARKE againſt its prevalency, in connexion with the general atony of all young infants, being a principal ſource of their complaints.*

Dr.

* SINCE the former edition of this work, and ſubſequent to two or three letters paſſing between us, Dr. CLARKE has offered a few obſervations on ſome infantile complaints in the laſt volume of the *Tranſactions of the Royal Iriſh Academy*. All that concerns the preſent debate, is, an obſervation on green ſtools voided by an infant he was attending, and a very curious obſervation it is; the nurſe having informed him, that they became of a yellow colour after the cloths had lain ſome time in a corner of the room: and this report the Doctor offers to the conſideration of thoſe who conceive the green colour to depend upon ſome acidity in the firſt-paſſages; which he thinks the above change may render further ſuſpicious.

THAT the ſtools of infants, not in perfect health,

Dr. CLARKE concludes by obſerving, that "the young of all the ruminant animals, fed on milk of a much more aceſcent nature, ſuffer no inconvenience from this ſource." To ſuch laconic arguments,

though voided of a bright yellow colour, will turn green upon being kept twelve, or twenty-four hours, muſt have been obſerved by every one converſant with ſick children; but I muſt confeſs that I never before have heard of green ſtools turning yellow, whatever the infant's complaint may have been. I have now been in the habit of paying attention to children's ſtools for many years; and in many inſtances, when not in a daily attendance, a great number of cloths have often been preſerved, for two or three days, for my inſpection; ſo that, were ſuch a change common, I am perſuaded I could not have failed to notice it. What the particular cloths ſhewn to Dr. CLARKE might meet with on the floor, in a corner of the room, to account for ſuch a change; or what other unuſual occurrence there might be in their previous waſhing, I can ſay nothing to; therefore for the preſent ſhall only remark, that ſuch important appearances ought to be frequently obſerved, and accounted for in ſome better manner than the report of an individual nurſe, before any argument can be founded on them to ſubvert the fair inference from innumerable facts.

I think

I think it might be fairly replied, that many ruminant animals can eat, and digeſt, *bones*; and hop about likewiſe when their own bones are broken or diſlocated, without manifeſt injury, or much expreſſion of pain. And in this view I might adduce the remark, made elſewhere,* on the rank which animals ſeverally hold in the ſcale of beings: it being very evident, that beſides the ground of comparative health and diſeaſe ariſing from the bulk and ſtrength of various animals, there is that of their ſeveral ranks in that ſcale, commencing with man, the head, and extending from the invaluable ſheep, the cow, or the horſe, to the loweſt of our domeſtic animals, and to reptiles; the more noble and uſeful (from whatever cauſe) being, I believe, uniformly ſubject to the moſt and ſevereſt diſorders. Thus the fragile worm daily ſurvives ſome kinds of injuries, which the ſturdy ox could not; while the delicate infant would

* Vol. I; pages, 7, 8. *Note.*

ſink under that, which the lamb could with ſafety endure.—But what ſhould we learn, on the preſent occaſion, by purſuing ſuch compariſons? "Man (ſaid one) is not a fly"—no, nor yet a tyger.—Such arguments, at the beſt, are very equivocal, and one might be ſet againſt another without end. We do not, for inſtance, ſuſpect that quadrupeds in a ſtate of pregnancy, are afflicted with acidity or heartburn any more than their young are from the curdy principles of the milk by which they are nouriſhed; but we are certain, that many breeding women are tormented with ſuch complaints for a great length of time, feed on whatever they may. It is confeſſed alſo, that the milk of quadrupeds abounds with cheeſy principles, and that human-milk contains a far leſs proportion; (or according to our author, none:) here then is a glaring diſparity in the very point at iſſue; and from which the inference drawn by Dr. CLARKE, (were even his experiments concluſive) does not ſeem more natural than the obſervation

ſervation already advanced on the wiſdom of Providence in abating of that quality in human milk, becauſe a greater propenſity to acidity, or exceſs of a cheeſy principle, muſt, from the atony of infants, render ſuch a quality peculiarly noxious to them.

It has been obſerved, however, that I can myſelf no longer entertain any doubt of the *exiſtence* of this principle in breaſt-milk, though it may vary in its quantity and conſiſtence; nor heſitate to inſiſt, that the reſult of my experiments on human-milk, and infantile green-ſtools, (which it has been ſaid, *do ſtain* blue paper, red) completely overturns all that Dr. CLARKE has advanced, to the entire ſatisfaction of my own mind: but as our contradictory aſſertions, (as to facts) cannot ſatisfy thoſe who have not made the like experiments, I have ſubmitted the matter in a way of fair argument, and appeal to the diſcernment of the reader.

SINCE theſe obſervations on Dr. CLARKE's Eſſay were drawn up, I have, however,

been able to adduce a teſtimony which I conceive will not generally be diſputed, and with which many of my readers may poſſibly have been well acquainted before I was. Had I met with it ſooner, it would, probably, have ſaved me a great deal of trouble; but the *Hiſtoire et Mémoires de la Société Royale de Médicine, année* 1790, might not perhaps have fallen in my way to this day, if my good friend Dr. *Andrij* of *Paris* had not made me a preſent of it; though long after I had completed my experiments on human-milk. It were needleſs in this place to quote, in detail, the experiments there recorded; it muſt be ſufficient to give tables of their reſult,* and to ſay that they correſpond exactly with my own, referring to the volume itſelf for an ample account of the modes of inveſtigation, further properties, and component parts of various milks there ſpecified, demonſtrated by numberleſs experiments, and upon multiplied authorities.

* See the annexed Table.

To

To ſum up the whole, then, upon Dr. CLARKE's own principles, and forbearing for the preſent to inſiſt either upon my own experiments, or others, it may be fairly urged, that, in diſorders of the firſt-paſſages, the matters ejected both by vomiting and ſtools are frequently flaky, coagulated, or curdy; that they have a ſenſibly ſour ſmell; and that the ſtools are often of a green colour, very numerous, and attended with griping pains. That theſe ſymptoms and complaints are removed by ſuch remedies as are allowed to correct acidity in other inſtances, or are mitigated in a greater or leſs degree, as long as ſuch medicines remain in, and are acting on the ſtomach and bowels, and mixing with their contents. That, moreover, every kind of aliment which during its digeſtion is alike peculiarly diſpoſed to produce acidity, both in the adult and infant ſtates, always increaſes the above ſymptoms; breaſt-milk, however, (from a healthy nurſe) the peculiar food of infants, being leſs com-

commonly found hurtful to them, becauſe more thin and lighter on the ſtomach than moſt other food, and having leſs of that true curd found in moſt other milks. But whenever human-milk happens to diſagree, the ſymptoms are exactly the ſame as in infants brought up by hand; though in other inſtances, a recourſe to it, (or even aſſes-milk) frequently proves a remedy, for children whoſe bowels have been diſordered from being previouſly nouriſhed by the ſpoon. And though this fact may indeed, fairly prove it to be far leſs diſpoſed to turn curdy and acid than cows milk, and farinaceous ſubſtances; yet the circumſtance of ſucking children being often afflicted in preciſely the ſame manner, and relieved by the ſame medicines with children brought up by hand, equally demonſtrates the cauſe of their complaints to be exactly ſimilar; and that human-milk, when mixed with the gaſtric juice, is diſpoſed to turn acid, and its component parts to ſeparate improperly, or, perhaps, too haſtily, as in adults

adults whoſe digeſtion is bad. And that on theſe accounts, the milk becomes curdy, occaſioning indigeſtion and wind, which jointly irritate the nervous coat of the ſtomach and bowels, and produce complaints that endanger the infant's life, unleſs remedied by the known correctors of acidity. Nor are theſe effects, by any means, rare occurrences, or confined to tender and delicate infants, as Dr. CLARKE would inſinuate: and on this head I may venture to appeal to his own, and every practitioner's experience, as well as to the mortality in the *Dublin* Lying-in hoſpital.* It may be addded, that a diſpoſition to theſe complaints often continues as long as infants remain at the breaſt, or live on any other milk diet, but are diminiſhed as ſoon as they take freely of animal food; and that this change does not depend merely on their more advanced age, but on the alteration of diet, is pretty evident from the like advantages

* See the note at the cloſe of this *Introduction*.

being

being often obtained by allowing them a little broth, once or more every day, at a much earlier age.

SUCH then are the facts in regard to diet, the alvine diſcharges, and complaints of the firſt-paſſages during infancy; and ſuch are the effects of certain medicines known to correct or abate acidity; and to what ſhall they be attributed, or what can be more naturally inferred from theſe premiſes, than that there certainly is an aceſcent tendency in the gaſtric juices of infants, (uſeful, no doubt, upon the whole,) and a quality in *every kind* of *milk* diſpoſing it to be curdled or coagulated, and become acrid by the admixture? To theſe obſervations might be added that of infants being ſo very rarely attacked with fever, however ſevere or continued their pains, or other complaints may be; and though many good reaſons might, doubtleſs, be given for this exemption, yet none can exclude, the well known aphoriſm of the father of phyſic, before quoted, nor be more appropriate

to

to the occaſion than that maxim, "*acidum eructantes non ſunt pleuritici.*"

I HAVE no deſire to enter into a formal diſpute with any man, much leſs to contend for mere opinions irrelative to practical truth; but ſhould any perſons be determined to diſpute both the inferences and facts I have advanced, let them, at leaſt, tell us *what* it is that ſo uniformly acts as an acid might be expected to do, curdling or thickening the contents of the ſtomach, offending the bowels, producing green and ſour-ſmelling ſtools, with other ſymptoms of indigeſtion recurring ſo uniformly in delicate infants: effects which nothing could ever be contrived totally to prevent, nor can any thing ſo uniformly relieve as *ant-acids* or abſorbents. May it not juſtly be preſumed to be ſomething not eaſily diſtinguiſhed from what we term an *acid* in atonic adults? How much leſs injurious, however, this diſpoſition may be, than that tendency to putreſcency prevailing in the latter, induced by a very different diet,

diet, and a more exalted bile neceſſary to digeſt it, may be fairly preſumed; and upon which, it has been noticed, I have already given my own ſentiments at large, even in former editions of this work. It may, however, be juſt remarked in this place, that it might, poſſibly, be fairly urged, that infants muſt, therefore, either be exempt from their ſhare of the infirmities of human nature, (unleſs infected by their parents, with ſcrofula, lues, &c.) or be peculiarly liable to diſorders ariſing from acidity in the firſt-paſſages, which are confeſſedly amongſt the ſlighteſt evils, and at the ſame time a probable occaſion of their eſcaping thoſe of a more dangerous tendency.

I CONCLUDE, therefore, with obſerving, that indebted as the Public is, and particularly gratified as I am, by the pains and reſearches of Dr. CLARKE, I cannot but inſiſt, that his inductions are neither properly made out by experiments, nor ſupported by the arguments he has advanced: nor is it, perhaps, perfectly certain,

tain, what eſſential difference there may be between every poſſible combination with human-milk out of the body, and its natural mixture with the gaſtric juice in the ſtomach of an infant. What changes the temperature and action of that viſcus, whether mechanical, or chymical, may be capable of producing, cannot for certain, be either proved or diſproved from mere ſpeculation; ſo that whatever opinion we may form, muſt remain very problematical, any further than matter of fact may diſcover their operation, in the different ſtages of digeſtion, both in atonic and athletic ſubjects. But in fine, whether under all, or any particular circumſtances, any of the gaſtric juices be preciſely what chemiſts would term an acid; or whether the offenſive matters, under an imperfect digeſtion, be uſually of the nature of curd, butter, or phlegm; or whatever theory Dr. CLARKE, or others, may from his reſearches be juſtified in advancing, at ſome future period, cannot weaken the force of any fair inference from facts.

The

The author of this work, indeed, ardently wiſhes, that a practical improvement may be made of every diſcovery; but whatever the improvements may be, it does not ſeem likely from the above impartial ſtatements, that the treatment of *infantile* diſorders recommended by him, and in many particulars very generally adopted for the laſt half century, will undergo any eſſential alteration.*

DIREC-

* Dr. CLARKE concludes with expreſſing a hope, that a ſyſtem of practice more rational than the preſent may be ſtruck out.—What has been the preciſe mode of practice, or its ſucceſs in *Ireland*, I can gueſs only from Dr. CLARKE's ſtatement in regard to the *Dublin Lying-in Hoſpital*; where, paſſing by thoſe years in which an epidemic is ſaid to have raged amongſt the children, the number of deaths has ever been far beyond the average in the *Britiſh Lying-in Hoſpital*, in *London*, where the old plan of treatment is purſued.

IN ſupport of this aſſertion I ſubmit the following ſtatement of the two hoſpitals, (and it is preſumed, not an unfair one,) being copied from the printed accounts of that in *Dublin*, and from certain outlines drawn up, on another occaſion, by Dr. CLARKE himſelf; and contraſted by correſponding extracts from the

# A COMPARATIVE ANAL[YSIS]

*Of the Milk of Women, the Cow, Goat, Ass, Sheep[, and the Mare;]*

By M. BOYSSOU of *Aurillac* in *Upper-[Auvergny.]*

| Quantity of Milk. | Names of the several Animals. | Their Nourishment, &c. | Ages of the Milks. | Quantity of Butter. | Quantity of Cheesy Matter. | Quantity of ri[ch] | [Quantity of Saccar-ine Salt.] | Quantity of Extract. | Produce or Extract in Bal. Mariæ. |
|---|---|---|---|---|---|---|---|---|---|
| One Mark-pound Weight. (16 Ounces.) | Woman's milk. | Inhabitant of a City. | 7 months. | 4 drachms, 48 grains. | 1 drachm, 48 grains. | 6 [dr.] 48 [gr.] in [a] talli[n] | [drachms, grains, cryf-tions.] | 1 drachm. | 1 ounce, 8 grains. |
| Ditto. | Cows milk. | Fresh Pas-turage. | 6 weeks. | 3 drachms, 45 grains. | 5 drachms, 51 grains. | 4 d[rachms] 40 [gr.] in [a] talli[n] | [chms, rains, cryf-tions.] | ½ drachm. | 9 drachms, 42 grains. |
| Ditto. | Asses milk. | Ditto. | 3 months. | 4 drachms, 24 grains. | 7 drachms, 48 grains. | 3 d[rachms] in [a] talli[n] | [chms, cryf-tions.] | ½ drachm. | 2 ounces, 16 grains. |
| Ditto. | Asses milk. | Ditto. | 2 months. | 10 grains. | 2 drachms, 16 grains. | 6 d[rachms] 16 [gr.] in [a] talli[n] | [chms, rains, cryf-tions.] | 1 drachm. | 7 drachms. 12 grains. |
| Ditto. | Sheep's milk. | Ditto. | 3 months. | 5 drachms, 40 grains. | 7 drachms, 30 grains. | 3 d[rachms] in [a] talli[n] | [hms, ryf-tions.] | ½ drachm. | 2 ounces, 16 grains. |
| Ditto. | Mares milk. | Ditto. | 2 months. | 6 grains. | 2 drachms, 48 grains. | 4 dr[achms] 48 g[rains] in 5 tallifa[ns] | [hms, ins, ryf-ions.] | 2 drachms, 36 grains. | 7 drachms, 12 grains. |

A comparative ANALYSIS, by ABRAH. VAN-STRIPRIAAN LU[SIO], *Physician* to the *Dauphin*; and NICOL. BONDT, *Physician* at *Am[sterdam.]*

| [...so.] | Cream. | Butter. | Chees[e] | Sugar. |
|---|---|---|---|---|
| [C]ows milk. | $4-\frac{1}{16}$. | $2-\frac{11}{16}$. | $8-\frac{15}{16}$. | $3-\frac{1}{16}$. |
| Woman's. | $8-\frac{11}{16}$. | 3 | $2-\frac{15}{16}$. | $7-\frac{5}{16}$ |
| Goats. | $7-\frac{15}{16}$. | $4-\frac{0}{16}$. | $9-\frac{1}{8}$ | $4-\frac{3}{8}$. |
| Asses. | $2-\frac{15}{16}$. | —— | $3-\frac{5}{16}$ | $4-\frac{1}{2}$. |
| Sheep's. | $11-\frac{0}{16}$. | $5-\frac{13}{16}$. | $15-\frac{1}{2}$. | $4-\frac{3}{16}$. |
| Mares. | $\frac{13}{16}$. | —— | $1-\frac{5}{8}$. | $9-\frac{1}{16}$. |

the *Britiſh Lying-in Hoſpital*, ſubſequent to thoſe quoted by the Doctor.*

And firſt, from his own ſtatement, it appears, that in the old *Lying-in* hoſpital in *Dublin*,† (reckoning from its firſt inſtitution, when, probably, the furniture was new, and there exiſted no peculiar remote cauſes of diſeaſe) out of 3,746 infants, 241 died *within the month*; that is, between ſix and ſeven in every hundred: but that in the *Britiſh Lying-in* hoſpital, (confeſſedly a very old and ill-contrived edifice) the Doctor reports, (reckoning likewiſe from its firſt inſtitution) only 146 died, out of 3,611; which is only as four to the hundred.

After this period the endemic commenced,‡ and the fatality greatly increaſed; the Doctor then remarks, that after proper means were taken to remove the remote cauſes of that fatal diſeaſe, only 419 infants died out of 8,033 births; that is, from five to ſix in every hundred.

It appears from the printed accounts of the hoſpital, that this period is taken from the year 1783 to 1788, incluſive. But, the like accounts of the *Britiſh Lying-in* hoſpital, during the very ſame years, report that, out of 3,374 children born there, only 95 died; which is under three in each hundred.

BUT to render theſe calculations more immediately applicable to Dr. CLARKE's obſervations on the treat-

* For their perfect accuracy, it is not to be expected we ſhould either of us be anſwerable, as much muſt depend upon the report of inferior officers; but on my own part, no wilful or known miſtatement is offered.

† See Tranſactions of the *Royal Iriſh Academy*, *anno* 1789.

‡ See *Nine-days-diſeaſe*, vol. 1. pages 156, 157.

ment of infants, I ſhall to theſe ſix years, add the *Dublin* printed account of the three ſucceeding ones, thereby increaſing the above period to nine. During theſe years, the number of deaths was, indeed, amazingly decreaſed, ſo that the endemic, eſpecially during the three laſt, ſeems to have entirely given way; and it being alſo during this period, that Dr. CLARKE had taken up his new theory both of the nature of *human-milk*, and the early diſeaſes of infants, a compariſon of the number of deaths in the two hoſpitals, and any inference from it, will be brought to a fair iſſue. It appears then, that from the year 1783 to 1791, 12,688 children were born in the *Dublin* Lying-in hoſpital, out of which, 593 died; which is as, $4\frac{2}{3}$ in an hundred. But, in the *Britiſh* Lying-in hoſpital, during the ſame years, 5,233 children being born, only 112 died; which is but little more than two in each hundred. In the laſt of the above years (as well as during many former ones) only two children died in the *Britiſh* Lying-in hoſpital, out of 627 born there; and in the year before that, no more than five, out of 630, which number alſo was not exceeded in ſeveral preceding years,* and ſeems to prove almoſt to demonſtration, that

* So that the number of infants dying in the *Britiſh Lying-in* hoſpital under three weeks old, is uſually far leſs than that of *ſtill-born* children, as Dr. CLARKE ſeems to notice with ſome ſurprize, in regard to one of the *London* hoſpitals he has occaſion to mention; but as it, indeed, ought to be every where, at that early period.—If ſmall things may be compared with great, it may be added here, that ſpeaking from memory, I have reaſon to think, that in my private practice, during the laſt five years, I have not loſt more than

that the entire management of infants in that hoſpital, as well as the practice of the preſent day, muſt be rational and judicious; and is far from calling for a total ſubverſion of the principles by which they have been always regulated.

I add, that in the *Britiſh Lying-in hoſpital*, from the year 1757, (being that in which the hoſpital in *Dublin*

than three infants under a month old; which is much below the average of ſtill-born children, that has fallen to my lot, and of which I have an exact regiſter.

In alluſion to this remark, as well as to add my mite to aſſiſt the inquiries of other calculators, I annex the following ſtatements taken from the regiſters of the hoſpital.

Infants *Still born.*

During the firſt ten years, one in 32.
the ſecond ten years, one in 37.
the third - - one in 26.
the fourth - one in 19.

It hence appears, that the *average* of ſtill-born children has been, as 1 to 25.

THE *Average* of *Deaths*,

During forty years, has been, one in 34.
the laſt eight years,* one in 84.

THE *Average* of *Twins*;

During forty-eight years, one in 86.
Boys to Girls, as 17 to 16.

* It appears from the hoſpital regiſter, that during the laſt five and twenty years, the average of deaths has been conſiderably leſſened, and alſo that a ſmaller proportion of infants has died in the laſt eight than at any period ſince the firſt inſtitution of the Charity; and it may, perhaps, be fairly conjectured, through improvements made in the management of infants, which was not formerly ſo fully conſigned to Phyſicians.

was inſtituted,) to the year 1791, the average of children's deaths has been *under three* in the hundred; but that in the hoſpital in *Dublin*, during the ſeven *moſt ſucceſsful years* it ever experienced, (either previous, or ſubſequent to the endemic) the average is *above four*; though the mothers, uſually, remain there only a fortnight, but thoſe in the *Britiſh Lying-in hoſpital*, three weeks, and ſometimes a month.

I have been at the pains of ſtating this average, in the two hoſpitals, at different periods, that the reader might be competent to judge, *cæteris paribus*, of the probable better practice; and may ſee for himſelf, that, if the management of new-born infants, or the treatment of their diſorders, has been of late anywiſe influenced in *Dublin*, by Dr. CLARKE's new theory, it has not, hitherto, to ſay the leaſt of it, any great claim to the practitioner's attention, on the ſcore of its ſucceſs.

# DIRECTIONS

FOR THE

# MANAGEMENT OF INFANTS

From the BIRTH.

AMONGST the multifarious matter brought forward in the following pages, the Aliment moſt adapted to Infancy has been ſaid to be one of the firſt importance. Previouſly, therefore, to treating of Diet more extenſively, and the General Management of Children, I ſhall enter into a candid diſcuſſion of that particular, by conſidering the caſe of Infants intended to be reared without the breaſt, or brought up as it is termed by *hand*.

But it would carry me altogether beyond the limits I have aſſigned, were I to

enter ſo far into the inveſtigation of the ſubject, as to ſet forth all the impropriеties of that mode of training up infants from the birth. And I am glad to find by ſome very recent examples among perſons of rank, that there is leſs occaſion for it, than there appeared to be ſome years ago: and, indeed, the miſtake has generally originated with parents, rather than with medical men. It would be unpardonable, however, in a work of this ſort, not to inſiſt how inadequate every ſubſtitute for the breaſt has been univerſally found; and therefore how proper it is, that every child ſhould have it, and even be ſuckled by its own mother, where her health can ſafely admit of it.—Reaſon, inſtinct, experience, all conſpire to ſupport this opinion; and whoever will determine to attend only to matters of fact, may ſoon be convinced of it. Nature herſelf points it out: all the nobler part of the irrational creation is qualified for it, and by inſtinct it obeys—the human race alone, poſſeſſed of nobler powers,

and

and rational diſcernment, perverts thoſe faculties to evade its dictates, and to invent excuſes for refuſing its claims. But puerile, indeed, are all the common arguments againſt it, in the greater number of inſtances; and herein Dr. ARMSTRONG ſeems to have egregiouſly erred, for though, apparently, an advocate for ſuckling, he has laboured for arguments to apologize for the ſpoon and the boat, in too many inſtances.—It were eaſy, perhaps, to produce as ſound arguments againſt eating more than once a day, becauſe ſo many people become diſeaſed from exceſs. On the other hand, a new and very rational argument in favour of breaſt-milk, is advanced by Mr. Moss, who obſerves, that the gaſtric juices of every animal may be ſuppoſed to be the beſt ſuited to act upon its reſpective milk.*

BUT

* The duty of ſuckling has the ſanction of the moſt ancient writers, and is diſtinctly noticed by PLINY. VAN SWIETEN remarks, that one of the Queens of

BUT not only is the breaſt-milk the only natural,* and moſt proper food for infants, (experience demonſtrating, no artificial one to be equally eaſy of digeſtion, and nutricious,) but ſuckling conduces likewiſe to the eaſy recovery of the mother; though ſhe ſhould not be able wholly to ſupport her child by the breaſt, nor to continue ſuckling as long as the infant may require it. But though from

*France* ſuckled her own ſon, and continued it even during a fever. One of her ladies having, on ſome occaſion, given the child her breaſt, the Queen was ſo much diſguſted at it, that ſhe forced her finger into her ſon's mouth to excite vomiting; unwilling that it ſhould receive any nouriſhment but from herſelf.

* In ſome very northern parts of the world, as thoſe of *Greenland*, and the neighbouring country of the *Eſquimaux*, the breaſt appears to be, in the ſtricteſt propriety of ſpeech, the *only* food that nature has provided for infants; inſomuch that, whenever a ſuckling-mother happens to die, her infant is buried with her: experience (one would hope) having demonſtrated the inefficacy of the hard and coarſe diet which nature has there ſo ſparingly dealt out, it is eſteemed an act of compaſſion to put an end to an infant's ſufferings by plunging it into the ſea.

much

much experience I venture to give this opinion, I do, by no means, intend to aſſert, that every mother is able to ſuckle her child, even for the month, or would do well to attempt it; but I am, nevertheleſs, equally ſatisfied, that many are very well able who do not, and that ſeveral who have only through fear been diſcouraged from doing it, in two or three lyings-in, having afterwards been prevailed on to make the attempt, have gone on with it for ſeveral months, enjoyed better health when they ſuckled than at any other part of their lives, and their children have thriven perfectly well. Art and management will likewiſe afford ſome aſſiſtance, where the natural conſtitution, alone, may not be fully equal to the taſk. In this view, beſides a ſuitable diet, air, exerciſe and a regular manner of living; I will venture to recommend cold-bathing, eſpecially in the ſea, if the ſeaſon of the year ſhould permit; and this not only from my own experience but that of the writer juſt quoted, who aſſerts, that it

it is often found particularly uſeful in reſtoring the ſtrength, and increaſing the milk in nurſes of a weak conſtitution; adding, that it can never do any harm to a woman merely as a nurſe, where no other reaſon independent of that ſituation, forbids it. The principal caution neceſſary, being, not to bathe too frequently; more than twice, or at moſt three times a week being often injurious to delicate habits.

Thus, beſides the advantages derived to infants, it appears there are others reſulting to the ſuckling mother, and ſome deſerving a further notice. For by this means, where due care is taken, painful inflammations and ſuppurations in the breaſt may often be prevented, as may be fairly concluded, not only from the rarity of ſuch complaints in the *Britiſh Lying-in Hoſpital*, where almoſt every woman ſuckles her infant, but from the like authority of Dr. NELSON, who reports, that "out of 4,400 women who ſuckled their children, only four had milk-fores, and that

that theſe had either no nipples or former ſore breaſts." It has likewiſe long been ſuſpected, and of late years more generally imagined, that ſome of the worſt fevers, and more rare ill effects of child-bearing may, generally, be prevented, by ſuffering the milk to flow duly to the breaſts, and be freely drawn from them, though only for the month. Theſe advantages, one ſhould hope, might tend to induce ladies of rank to ſet a general example, by performing this kindeſt and moſt pleaſant office, at leaſt during the month. But it would be unjuſt not to add, that whenever they may purpoſe to aſſume it for a much longer time, they ſhould determine to do it effectually, or they will but injure their children, as well as forfeit many of the advantages and comforts, which in a due execution of it, they would have a right to expect.

For a long time, however, writers have ſucceſſively complained, that, notwithſtanding the many encouragements often brought to the ears, and urged upon parents,

parents, that tyrant Faſhion has prevailed over the good ſenſe and natural feelings of many, whoſe maternal affection can be, in no other inſtance, ſuſpected. It is with great pleaſure, nevertheleſs, that I have been able to obſerve, both in the laſt and preſent editions of this work, that ladies of rank are every year becoming converts to this maternal duty, and are proud of ſupplying their offspring with that new nouriſhment, wherewith nature hath purpoſely endowed them.

ANOTHER important, and affecting conſideration might be brought forward on this head, which I ſhall, indeed, only touch upon, as it calls rather for the pen of the moral philoſopher than of a phyſician, I mean, the ſacrifice which poor women make in going out to ſuckle other people's children; the ſad conſequences of which are often ſeverely felt by their own, through neglect or miſmanagement, and eſpecially for want of the breaſt. Indeed, no attention of the nurſe can duly compenſate this loſs; and only the moſt com-

common ſubſtitutes for it can, in their forlorn circumſtances, be allowed them. This becomes a ſource of evil, that, I fear, is not uſually thought of, and proves eventually the ſacrifice of many infants every year; a matter of ſerious importance, indeed, to the public, as well as to the families immediately concerned.*

IT gives me real concern to find occaſion for the leaſt unpleaſant reflections upon any part of the ſex I ſo much honour, and upon any of my fair and ſenſi-

* It is with peculiar ſatisfaction, that I congratulate the benevolent in the proſpect of the evils hitherto attendant, being ſhortly obviated to a greater degree than could have been expected, by the admirable inſtitution deviſed by Drs. DENMAN and CROFT; and that it has met with all the ſupport that could be wiſhed for, from families of wealth and rank. A proper houſe in a healthy and convenient ſituation, for the reception of the infant-children of poor women engaged abroad as wet-nurſes, which for ſometime retarded the execution of this benevolent deſign, being now removed, our moſt gracious QUEEN has condeſcended to ſtand forward as its auguſt *Patroneſs*, and their ROYAL HIGHNESSES the PRINCESS of WALES, and DUCHESS of YORK, as the *Vice-Patroneſſes*.

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ble countrywomen, in particular. Nevertheleſs, I cannot help ſuſpecting, that wherever any neglect of parental duties may exiſt, whether in regard to ſuckling, or ſuperintending the management of their children,* that does not ariſe from want of health, or ſome equally warrantable excuſe, it can be charged only on the depravity of the age, which inſenſibly corrupts the taſte, and perverts the judgment of many who wiſh to do well. And depravity of manners, when once become general, has ever been conſidered as the leading ſymptom of a falling empire, and

* This ſeems to be the caſe at preſent amongſt the lower claſs of people in *France:* and that nation is therefore very much indebted to the goodneſs of the late Monarch, who to the laſt, was making ſolicitous inquiries through *Europe* to diſcover the beſt ſubſtitute for the breaſt.‡ Should the method recommended in the ſubſequent pages be, amongſt others, adopted, its claim will ſoon be determined; and I venture to hope, will yet be to the advantage of the riſing generation in that kingdom, and elſewhere.

‡ See *Queſtions* propoſed to the *Royal Society of Medicine in Paris*, October 1789, by the late KING'S authority.

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ought to be pointed out as far as it extends, by every friend to the community, at whatever hazard of giving offence, in every conſpicuous inſtance of it. TACITUS complains of the degeneracy of *Rome* in his days, (though by no means its moſt degenerate era,) lamenting that, while in former times grave matrons attended to their children, as their firſt family concern, they now, ſays he, intruſt them to the care of ſome *Grecian* girl, or other inferior domeſtic.—It is no ſmall ſatisfaction to me, however, to obſerve, that in this country there has been no ground for much complaint on this head, and that the evil is annually diminiſhing; there are alſo examples of the firſt magnitude of a nobler conduct, and one, at the head of all, which were it copied, without exception, in domeſtic life, would prove the glory of the preſent day, and a bleſſing to the riſing generation.—May the time haſten when it ſhall be univerſally followed by her inferiours, whilſt I attempt to point out as far as my obſervation has

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extended, the moſt prudent means of executing this important branch of female duty.

IT may not be amiſs, at the opening of the enſuing obſervations to remark, that the demand for the multifarious directions here offered, as well as all thoſe given by other writers on the management of children, ariſes from the falſe reaſoning of thoſe to whoſe care the infant ſtate is frequently intruſted; who inſtead of being guided by the ſober dictates of nature, have adopted the rules of art, falſely ſo called, or have followed the wild fancies of anile ſuperſtition.

On the other hand, the various tribes of the irrational ſpecies act in a thouſand inſtances more prudently than we do, and being uniformly guided by inſtinct, are led implicity, and ſafely through all their operations. Many quadrupeds, fiſh, and even reptiles ſeem to know what is proper for them as ſoon as they come into exiſtence, and have ſtrength ſufficient to reach after it. In other inſtances, they

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are guided by the parent, who ſeems to adjoin ſome degree of knowledge acquired by experience, to the inſtinct with which it is naturally endowed. Man on the contrary, deſigned to be the pupil of obſervation, has ſcarce any innate diſcernment; and conſequently his infant race paſs through a long period utterly helpleſs, alike diveſted of ideas to guide, and of ſtrength to manage for themſelves. But to the Parent is imparted both; whoſe province it is to judge for them, and actually to put into their hands or mouths, whatſoever they may ſtand in need of. When the parent, therefore, forſakes the paths of ſimplicity, and lays down arbitrary rules, the reſult of falſe ſcience, inſtead of patient experience; or miſtakes the clamour of faſhion for the voice of nature, confuſion and diſeaſe muſt be the unavoidable conſequence.—Awakened by theſe, man is loudly called upon to return to the ſimplicity of nature, and the reſult of diſpaſſionate obſervation. It is this will be our aim in the work before

us, wherever danger and deviation are connected; aſſured, that the experience of the moſt judicious and ſucceſsful practitioners will applaud the deſign, and confirm the generality of our obſervations.

To this end, let us imagine an infant juſt born, who, doubtleſs, at this moment, calls for our beſt attentions. And firſt, it may be obſerved, that it ought not to be expoſed to any thing that may violently, or too ſuddenly affect the ſenſes: on which account, MOSCHION and ALBINUS have well adviſed, that it ſhould not be expoſed either to great heat or cold, nor to a ſtrong light, nor odours of any kind, however grateful to adults; the unpleaſant effects of which are ſufficiently manifeſted by the infant itſelf.

THE attention will next be called to waſhing and dreſſing it, together with other little offices ſuited to the occaſion. And this firſt waſhing is of more importance than is uſually imagined, being amongſt the *little* things which are often overlooked by writers and others, (and by

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ſome thought of no conſequence;*) but it is not every little thing that may ſafely be neglected, or careleſsly done. In regard to poor people, eſpecially, and infants born in hoſpitals, and other crouded apartments, the importance of proper waſhing is greatly increaſed, the foulneſs left upon the ſkin being a remote cauſe of ſome dangerous endemic complaints.† Some infants alſo are covered much more than others with a thick, viſcid matter, which cleaves ſo faſt to the ſkin, that it is not eaſily waſhed off; which there is, however, another reaſon for doing, as it would obſtruct perſpiration, which can never be duly performed, where the ſkin is left anywiſe foul. On this account, nurſes ſhould be directed to be very attentive to this firſt concern of their infant charge, and whatever waſh they may make uſe of, it ſhould always have ſoap in it,

* Dr. *Hamilton.*

† See *Monſ. Baumes*, on the *Jaundice* and *Meſenteric-fever.*

and the child be well rubbed, eſpecially under the arms, in the hams, and groins, where this mucus is apt to adhere: and to this end, it would be better that no pomatum ſhould be made uſe of, or other greaſe, which tends to ſtop up the pores, and prevent perſpiration; or that nurſes be, at leaſt, very careful the greaſe be afterwards well wiped off. In the ſame view, it were well if it were a common practice to repeat the waſhing for two or three days, with light friction of the ſkin; which it is not improbable might tend to prevent the red-gum and other ſimilar affections of the ſkin, with ſuch other complaints as may ariſe from the ſuppreſſion of inſenſible perſpiration.

After a little time, and ſometimes on the next day, moſt nurſes waſh a child all over with cold water; a practice highly extolled by Dr. ARMSTRONG, as well as many other practitioners. But though no one can be a greater advocate for every thing that is bracing than I am, I cannot approve of this ſubſtitute for cold-bathing,

ing, as it is called; at leaſt, as an indiſcriminate practice. The cold-bath acts on a quite different principle, and is ſo very beneficial, that I could wiſh almoſt every child, eſpecially thoſe born in *London*, were bathed at three or four months old, (provided they be not coſtive, nor feveriſh at the time, have no internal obſtructions, nor the ſeaſon of the year be improper;) which I am certain would remove, or perhaps prevent, many of their complaints.* But to ſee a little infant of a few

* *Monſr. Le Febure de Villebrune* in his tranſlation of this work into *French*, has added a chapter upon *baths*; in which he highly extols the warm-bath, and as ſtrongly controverts the idea of the probable good effects of cold-bathing, and even makes uſe of a long chain of arguments againſt it, deduced, indeed, from an ingenious theory, and ſupported by quotations from the ancients; who practiſed, however, in a very different climate.—The ſhorteſt, and perhaps, the beſt reply to this ſpecious reaſoning, might be given in the well-known mode of DIOGENES to ZENO, whoſe arguments againſt the poſſibility of Motion, DIOGENES laconically refuted, by haſtily getting up, and walking acroſs the ſchool. We have, in like manner, only to

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few days old, the off-ſpring perhaps of a delicate mother who has not even ſtrength to

point to the numbers of children and young people, who from very weakly infants, have been rendered ſtrong and healthy, merely from a prudent uſe of the *cold-bath*; and may defy any man to produce the like inſtances of its oppoſite effects when made uſe of with the cautions which every powerful remedy requires. The *Spartan* women, likewiſe, afford us ſufficient evidence of the ſalutary effects of cold-bathing, notwithſtanding the comments made upon the women themſelves, by *Ariſtotle*, as quoted by our author.

AND, indeed, from the ſurpriſing good effects that ſometimes follow the uſe of Cold-baths, I do not wonder that Prieſts, in times of ignorance, have been known to account them holy, and dedicate them to ſome Saint; to whoſe influence certain Cures were attributed.

The ſalutary operations of the cold-bath are, however, eaſily accounted for, from its promoting inſenſible perſpiration, and rendering that excretion leſs readily affected by the impreſſion of the external air.

It may be known to agree with children, when they come out of it warm, lively, and their ſtrength increaſes on the uſe of it. On the other hand, if they continue cold, are diſpirited, and ſeem rather to loſe ſtrength, it may be as often prejudicial.

As a mean of acquiring that re-action and glow, which bathing is deſigned to effect, ſome people have very

to ſuckle it, waſhed up to the loins and breaſt in cold water, expoſed for ſeveral minutes,

very rationally recommended throwing a looſe flannel chemiſe over the child the inſtant it is taken out of the bath. This will not only ſecure from the unpleaſant ſhock ariſing from the cold air, but allow time for friction, along the courſe of the ſpine, which ſhould be continued all the while that an aſſiſtant is employed in wiping the lower extremities, and putting on their uſual covering. If this were duly attended to, I am perſuaded, that both many infants and adult perſons would be benefited by cold-bathing, who for want of that kindly glow, are unable to bear even bathing in the ſea.

But I muſt obſerve, that the abovementioned unpleaſant effects are frequently owing to an improper uſe of bathing, and for want of making a very obvious diſcrimination in the habit of body of different children.—For the tender and delicate, not only ſhould a good quantity of ſalt be put into the bath, but the water ſhould alſo at firſt be a little warmed, and children be brought only by degrees to endure it quite cold, which they will not by this means be the leſs likely to do: or ſhould the water never be perfectly ſo, (but merely below the heat of the ſkin) the advantages of ſuch bathing will, nevertheleſs, be conſiderable;* though the late Dr. HUNTER and others have

* *Hippocrates* ſpeaking of bathing, cautions againſt the two extremes of heat and cold. *De Liquid. Uſu.*

minutes, perhaps in the midſt of winter, (when children are more liable to diſeaſe than thoſe born in ſummer;) itſelf in one

thought differently. It is not merely from the coldneſs of the water that the benefit ariſes, but is rather from the ſubject being ſuddenly immerſed into a very different medium, (if ſo be, that medium be not actually warm) in which the contact of the external air is taken off during the immerſion, and is as ſuddenly reſtored on his being taken out. By this means, the blood is alternately puſhed forward into the extreme veſſels, and ſuddenly repelled to the heart, (in proportion to the coldneſs of the water and the powers of the ſyſtem) and ſuffers an advantageous attrition againſt the ſides of the veſſels. The ſmall paſſages are rendered pervious, and the contractile power of the heart is increaſed, as well as the muſcular fibres proportionally ſtrengthened.—The ſalt added to the water pretty certainly prevents taking cold, whilſt it adds to the ſtimulus on the ſkin, and has therefore a more ſalutary operation on the pores.

The infant having been put quite under water, ſhould be taken out as ſoon as it is poſſible. It ſhould be received in a blanket, and wiped dry with a cloth in the moſt expeditious manner; and as ſoon as it can be dreſſed, ſhould partake of ſuch exerciſe as may be beſt ſuited to its age. There will need no great attention to its being made perfectly dry, as a child will be leſs liable to take cold from a few drops of ſalt-water being left upon it, than by being long uncovered in ſome parts of its body, in an over-caution to wiping it dry.

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continued ſcream, and the fond mother covering her ears under the bed-clothes that ſhe may not be diſtreſſed by its cries; has ever ſtruck me as a piece of unneceſſary ſeverity, and ſavours as little of kindneſs, as plunging an infant a ſecond or third time, into a tub of water, with its mouth open, and gaſping for breath, in the old-faſhioned mode of cold bathing: both of which often induce cramps and pains in the bowels, and weakneſs of the lower extremities, but rarely an increaſe of the ſtrength. It ſurely cannot be amiſs, in winter time at leaſt, to take the cold off the water for the few firſt days, which it has been obſerved, will be uſeful in other reſpects; and whenever cold water is made uſe of, it will be quite ſufficient to waſh the child as far as a regard to cleanlineſs may require, which will always be the parts expoſed to the worſt kinds of galling and excoriation: on which account cold water is certainly uſeful. With this view, beſide the nates and groins, the arm-pits, folds of the neck, and parts behind

behind the ears, being alſo diſpoſed to ſlight chafings, may be occaſionally waſhed in like manner, and if the diſcharge be not checked by it, they ſhould be duſted with a little hair powder, the powder of lapis calaminaris, or of ceruſe, or a little white vitriol may be added to the water; which if the excoriations are not very conſiderable, will generally heal them very ſoon: ſhould theſe fail, they may be dreſſed with the red drying ointment of *Bate's* diſpenſatory, which is an excellent remedy in a thouſand inſtances, and has very undeſervedly fallen into diſuſe. But theſe drying remedies ſhould rarely be applied to the ears. In a very acid ſtate of the ſtomach, during the month, particularly where there is a purging with very green ſtools, the parts covered by the cloths are moreover infeſted with a ſtill more troubleſome excoriation, called Intertrigo, and whilſt that ſtate continues, will not be healed by any drying applications. I have found nothing ſo pleaſant, and uſeful in this caſe, as

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covering the parts with the thin ſkin found upon the veal kidney, which ſoftens, and cools them, till the cauſe of the complaint may be removed by the uſe of proper abſorbents. There is a mixed affection of this kind, however, in which theſe parts are not actually excoriated, but are very hard and ſwollen, as well as painful and inflamed; and the affection ſeems to be kept up by the acrid nature of the excretions, though not originally cauſed by it. In this caſe, inſtead of daubing the parts with wetted fuller's earth, gruel, or greaſy mixtures; an embrocation of elder-flower-water, with as much boiling milk as will render it moderately warm, has been immediately efficacious. But one grand mean of keeping children from chafing is to preſerve them very dry and clean;* articles of ſo much importance

* An error worthy of remark in this place, is, that of wearing a pilch (as it is called;) an old faſhion ſtill too much in uſe, and contributes not a little to make children weak: it being originally deſigned to be worn only

portance, that I ſhould have inſiſted much longer upon them, if I had not already far exceeded the bounds I had intended. It may be neceſſary, however, to drop a word more with a view to counteract a vulgar notion, familiar only to common people, that a frequent change of linen has a tendency to weaken new-born children; an abſurd idea that has not the ſmalleſt foundation in reaſon or fact. It is, on the other hand, next to impoſſible, that a child ſhould thrive or be healthy, if the ſtricteſt attention be not paid to cleanlineſs, which is one of the principal articles in which the children of poor people are at a great diſadvantage, and

only for the few firſt weeks after birth, but is often continued for as many months. It can anſwer no poſſible end but that of ſaving a little trouble, ſince inſtead of keeping children dry and clean, it has the directly contrary effect; for if it has received any wet through the uſual cloth laid under it, it ought itſelf to be changed as often as the other, or muſt certainly be damp and uncleanly; whilſt by heating the loins, and lower limbs, it has a manifeſt tendency to relax, and diſpoſe infants to become rickety.

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which becomes a conſtant ſource of rickets and diſtortions among them. But, indeed, little infants, if healthy, may oftentimes be ſo managed as to be much more cleanly, than even people of great delicacy have been wont to imagine; ſo as even to ſuperſede altogether the uſe of cloths, either by night or day.*

ANOTHER uſeleſs operation practiſed by nurſes, is, that of forcing out the milk from the little breaſts of new-born infants. Some children a day or two after they are born, have the breaſts exceedingly tumid, hard, and painful, containing ſomething like milk; and nurſes imagine it to be a great kindneſs to milk

* I have, indeed, known only three or four inſtances of it, (though there may be many that I have not been made acquainted with;) one of which was in the family of a Lady of rank, whom I was ſome years ago attending. I was there myſelf a witneſs to the good effect of holding a little pan under an infant of only four months old, as it lay acroſs the nurſe's lap; which I was aſſured had been her practice from the month, and that the Lady had obliged her nurſery-maids to do the like with her two former children.

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it out, as it is called. But I have often been grieved, to ſee a nurſe rudely rubbing, and even ſqueezing the breaſts already in a ſtate of inflammation, and continuing it even for ſome minutes, though the child's cries might convince her ſhe is putting it to pain. In the caſe of inflammation, a bit of bread and milk poultice is the propereſt application, but if the part be not inflamed, it can want nothing at all; though if it be thought ſomething ought to be done, a little oil with a drop or two of brandy may be gently rubbed in, or ſmall pieces of the litharge-plaſter may be applied, and lie on the parts till they fall off of themſelves. I have, indeed, had ſufficient evidence of ſuch conſiderable tumefaction and hardneſs, as to ſatisfy me, that when no violence is offered to the parts, the application of a bread and milk poultice will always prevent either ſuppuration, or other unpleaſant conſequence. I have met with inſtances in which the tumour has been much larger and harder

harder than I could have ſuſpected on ſuch an occaſion, and yet after continuing for more than a week without any ſenſible diminution or amendment, has ſoon afterwards ſubſided entirely.

HAVING conſidered theſe neceſſary preparations, I proceed to offer a few remarks on the prevailing errors in *Dreſs*.

UPON the firſt ſight of a new-born infant, every one is ſtruck with the idea of its weakneſs and helpleſſneſs; and we often take very improper methods of ſtrengthening it. It is *deſigned* to be weak and tender in this infant-ſtate, as is every other object around us.* Take a ſurvey of nature, from the firſt opening leaves of the vernal flower, or the more delicate foliage of the ſenſitive plant, to the young lion, or the elephant; they are all in

* Nous naiſſons foibles, nous avons beſoin de forces; nous naiſſons dépourvous de tout, nous avons beſoin d'aſſiſtance; nous naiſſons ſtupides, nous avons beſoin de jugement; tout ce que nous n'avons pas à notre naiſſance, et dont nous avons beſoin etant grands, nous eſt donné par l'education. ROUSSEAU.

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their ſeveral orders, proportionally weak, and cannot exiſt without ſome exterior ſupport. But they ſtand in need of nothing but what nature has prepared for them. If ſeed be caſt into a proper ſoil, it wants only the ſurrounding elements to enſure vigour and maturity. So, if the tender infant be born of healthy parents, and at its full time, it is uſually ſufficiently ſtrong; proper food and nurſing are the elements whoſe foſtering influence it requires—if it have theſe, it will need nothing more.

It is true, it is very weak; but is it therefore to be tight rolled, under the idea of ſupporting it, and giving it ſtrength? It is a bundle of tender veſſels, through which a fluid is to paſs, undiſturbed, to be equally diſtributed through the body, and which are therefore ſurrounded by a ſoft medium, capable of yielding to the impetus of their contents. Hence we cannot but conceive, how injurious any great preſſure muſt be to ſo delicate a frame, which before

fore birth ſwam in a ſoft fluid. But beſides this, the infant requires freedom and liberty on other accounts. The ſtate of infancy and childhood (as Dr. GREGORY obſerves) is impatient of reſtraint in this reſpect, through "the reſtleſs activity incident to youth, which makes it delight to be in perpetual motion, and to ſee every thing in motion around it."

Let us again advert to the irrational ſpecies, whoſe more ſagacious conduct ſo often diſgraces our own. There is no occaſion on which they do not ſeem to conſult propriety; and having a right end in view, they as certainly accompliſh it, and always in proper time—Doth a little bird deſign to prepare a lodging for her young? it is ſure to make choice of the fitteſt ſituation, whether to defend them from dangers, or obtain the moſt convenient ſupply of their wants; if to this end it be neceſſary to conſtruct the neſt of rough and ſtrong clay, it is

ſtill lined with down: the young lie warm and ſecure, but they lie at their Eaſe.

I am not ignorant, indeed, that for many years paſt, the very ancient tight mode of dreſſing infants has been diſcontinued, and for which we were probably firſt indebted to Dr. CADOGAN. It is certain alſo, that for the laſt thirty years, the faſhion recommended by him has been improving; but there is yet room to go forward, and were every tender parent in this country thoroughly ſenſible of its advantages, it would ſoon become faſhionable to ſee children as much at their eaſe on a chriſtening-day, as they are when laid at night in their beds. And I may be permitted to add here, what every modern practitioner has adverted to, that were ſtrings, almoſt in every inſtance, ſubſtituted for pins, phyſicians would ſeldom be at a loſs to account for the ſudden cries, and complaints of infants, which are too often produced by this needleſs part

part of their dreſs*—A practice, it is to be hoped, which may in time be laid aſide, ſince ſome of the firſt families in the kingdom have already ſet the example.

NATURE knows no other uſe of clothing but to defend from the cold—all that is neceſſary therefore for this purpoſe, is to wrap the child up in a ſoft looſe covering, and not too great a weight of it; to which ornaments enough might be added without doing miſchief. And had this matter been always left to the moſt ordinary diſcretion of parents, this is, probably, all that would have been done; but the buſineſs of dreſſing an infant is become a ſecret, which none but adepts

* A gentlewoman many years ago informed me, that one of her children, after long and inceſſant crying, fell into ſtrong convulſions, which her phyſician was at a loſs to account for, nor was the cauſe diſcovered till after death; when on the cap being taken off, (which had not been changed on account of its illneſs,) a ſmall pin was diſcovered, ſticking up to the head, in the large fontanelle.

muſt pretend to underſtand. The child itſelf, however, diſcovers to us the propriety of ſuch clothing, by the happineſs and delight it expreſſes every time it is undreſſed, and rubbed with a ſoft hand. Whereas, *the art of dreſſing* has laid the foundation of many a bad ſhape, and what is worſe, of very bad health, through the greater part of life. Inſtead, therefore, of a ſcrupulous and hurtful attention to ſuch formalities, nurſes would be much better employed in carefully examining new-born infants in order to diſcover any malformation of parts, eſpecially thoſe concerned in the excretions neceſſary to life, which, it has been ſaid, is ſometimes over-looked.

THE tender infant being dreſſed, and having undergone ſuch other little diſcipline as has been mentioned, is uſually ſo far fatigued by it, as ſoon afterwards to fall into a ſound ſleep. We ſhall conſider it as in this ſtate, and leave it a while to be refreſhed, whilſt I endeavour to conduct my reader through the various

other

other duties which the infant calls for from day to day, till it happily arrives at an age free from the peculiar dangers of infancy.

In the purſuit of ſuch a plan, we meet with a variety of miſcellaneous articles, and though many of them are not of apparent magnitude in themſelves, are in their conſequences highly worthy of notice; which that they may be thrown into ſome kind of order, may all be very well claſſed under the ſeveral heads of the *Non-naturals*, as they are called. Such are, Air; Meat and Drink; Sleep and Watching; Motion and Reſt; Retention and Secretion; and the Paſſions of the Mind: a due attention to which, may prevent many of the evils incident to this tender age—The firſt of theſe was ſaid to be AIR.

THE great importance of this has been ſet forth when ſpeaking of the *Diſeaſes* of infants: I ſhall here in a more particular way obſerve, that the age, conſtitution, and circumſtances of the child, and the

ſeaſon of the year, ought always to be taken into conſideration; *that* being highly proper on one occaſion, which would be very detrimental at another. In general it may be ſaid, that warmth is friendly to very young infants; but they ſhould, nevertheleſs, be inured gradually to endure the cold air, which is abſolutely eſſential to their health. I cannot therefore agree with Dr. ARMSTRONG, who thinks the rich loſe fewer children than the poor, becauſe they are kept warmer. On the other hand, it was aptly ſaid by one, that "a warm nurſery fills a cold church-"yard." In fact, it is not a mere cold, but a damp and confined air, that is ſo injurious to children, and to which the poor are peculiarly expoſed, eſpecially during ſleep. Much caution, indeed, is neceſſary on this head in this unſettled climate, and evinces the neceſſity of parents ſuperintending thoſe to whoſe care they intruſt infant-children, ſince nurſery-maids are often indiſcreet in keeping them too long in the air at a time; which is a

frequent

frequent occaſion of their taking cold, and deters many parents from ſending them abroad ſo often as they ſhould. Another, and a worſe, as well as common fault of nurſes and ſervants, is, that of ſtanding ſtill with children in their arms in a current of air, or even ſitting down with other ſervants, and ſuffering children who can run about, to play at a little diſtance by themſelves, ſit down on the graſs, and ſuch like; the conſequences of which are often a long confinement to a warm room, and either a prohibition againſt going out ſo much as they ought, or a freſh cold owing to ſome of the like irregularities.

But if children be properly clothed and attended to, they will not only endure a great deal of very cold, but of other inclement weather; though it has been obſerved, that caution and prudence are required in training up infants to withſtand, and profit from being abroad when the air is very cold or moiſt. Notwithſtanding, it certainly may be accompliſhed;

and it is a known fact, both amongſt the higher as well as inferior ranks of people, that thoſe children are the healthieſt and ſuffer the leaſt from colds, who are accuſtomed to be abroad in almoſt all kinds of weather. But to render children thus ſtrong and healthy, it is not ſufficient that they be abroad daily in a coach; they ſhould be carried on the arm, and be put on their feet, at a proper age, and partake of ſuch exerciſe, for a reaſonable time, as ſhall keep them moderately warm, and bring them home in a glow, inſtead of wiſhing to ruſh towards a fire the moment they return; ſuch ſudden tranſitions being always improper, and only render children more liable to take cold.

KRUGER has ſome ſuch pertinent remarks on this head as it will ſcarce be thought a digreſſion to tranſcribe. "The "important ſtep" (ſays he,) "a man "takes into this world imparts to him "all the privileges thereof, of which this "is one, the ability to bear the effects of "the

" the air. Why then debar him from
" this privilege? as he is all his life to
" be encompaſſed with this air, at one
" time cold, at another warm, now moiſt,
" again dry. For the cold of the air ſo
" anxiouſly avoided, brings along with it
" the means that ſecure againſt its own
" inclemency; the great ſtrength of fibres,
" imparted by it to the child, procures,
" by means of a briſker circulation, a
" greater degree of heat, and conſe-
" quently the reverſe of its violent im-
" preſſion. This, indeed, may ſeem un-
" intelligible to thoſe who imagine the
" human body to be only an hydraulic
" machine, conſiſting of innumerable
" tubes, in which the wheel is mov-
" ed without a proper power, conſe-
" quently without a ſufficient reaſon;
" not to thoſe who can diſtinguiſh be-
" tween the effects of nature and art, who
" are appriſed of the power that moves
" the animal body, and that the ſenſations
" are ſuch a power, which ariſe with-
" out our knowledge and our will. To

" ſuch

" ſuch only it will be intelligible, in " what manner an increaſed reſiſtance, " produced by the cold in the ſolids and " fluids, is capable of bracing the heart, " the ſource of life. From a ſlight know- " ledge of mechanics we come to un- " derſtand that the reſiſtance diminiſhes " that power, which in animal bodies it " increaſes; come to ſee, that the moſt " ingenious conſtructions produce no " manner of motion; that all mechani- " cal laws are, indeed, perfectly juſt, but " more accurately to be determined, in " order to a proper application of them " to the human body, in which the will, " imagination, and ſenſations, are the " ſprings of motion, without which all " motion would ceaſe, and only leave a " machine reſembling a water-work, to " be carried about by wind.—We need " only appeal to experience, which will " teach us, that in order to a healthful " ſtate, we need not be brought up like " thoſe who are indulged with a bed of " down, and a warm room, but thoſe, of

" whom

" whom no extraordinary care being " taken, are greatly left to their own " diſpoſal."

It is, indeed, generally owing to ſudden tranſitions only that ſome infants ſo readily take cold. This ſometimes happens as ſoon as they are born, and repeatedly during the month; the ſlighteſt ſymptom of which is that called the *Snuffles*, or ſtoppage of the noſe. This is, indeed, a trifling complaint, but as ſuch, may be juſt noticed in this place. It uſually requires nothing more than a little pomade divine, or other unctuous aromatic to be put to the noſtrils when the child is laid in the cradle; or if this fail, a little white vitriol may be diſſolved in roſe-water, and the oſſa naſi often wetted with it.

IT will be adviſeable, in order to inure infants to the air, that they be ſhort-coated as early as the ſeaſon of the year will permit; but their dreſs ſhould be ſtill looſe and eaſy, and they may continue without ſtockings even for two or three years, and

and boys till they are breeched. As to this change, I think, it would with more propriety be made in the beginning of winter, than in ſummer, as the dreſs upon the whole is warmer, eſpecially about the cheſt, which from having been open for three or four years, it ſeems, rather ſtrange to cover, all at once, at the beginning of hot weather.*

But though I have ſaid children would be as well without ſtockings, for a conſiderable time, I muſt remark, that circumſtances are always to be taken into conſideration. *Mutatis mutandis* ſhould not only be the motto of phyſicians, but of common life, and we ſhould be guided by it in regard to all general rules. For want of this caution in the preſent inſtance, tender children ſuffer exceedingly in ſevere winters, and are diſtreſſed with

* The propriety of this remark was more ſtriking at the time the former editions of this work appeared, when the dreſs of young children was different from what it is at preſent, and to which it may poſſibly revert.

chil-

chilblains merely for want of proper covering to their tender limbs. I have ſeen a child of four years old, the daughter of people of faſhion, whoſe legs were covered with theſe ſores quite up to the knee, and yet her mother could not be prevailed upon in time, to ſuffer ſtockings to be put on, becauſe ſtrong and healthy children are thought to be better without them.

THE ſecond Article under the head of Non-naturals refers to MEAT and DRINK, and is worthy of ample diſcuſſion; having as yet been conſidered only in relation to the expediency of breaſt-milk, where that may anywiſe be procured.

IN the firſt place it may be remarked, that although an infant be ſuckled by its own mother, it certainly can ſtand in no real need of any food, till the time nature will bring milk into her breaſt, ſuppoſing the child be laid to it in proper time; which, doubtleſs, ought to be as ſoon as ſhe may, by ſleep or otherwiſe, be ſufficiently refreſhed to undergo the little

little fatigue that an attempt to ſuckle may occaſion. This method, however unuſual with ſome, is the moſt agreeable to nature, and to obſervations on the irrational ſpecies; who in many things are the very beſt guides we can follow.* And herein, I am conſtrained to differ from a late writer† whom I have more than once quoted with approbation; for by means of putting the child early to the breaſt, eſpecially the firſt time of ſuckling, the nipple will be formed, and the milk be gradually brought on. Hence much pain, and its conſequences, will be prevented, as well as the frequency of ſore nipples,‡ which in a firſt lying-in, have

* This ſubject is largely and elegantly treated by Dr. GREGORY, in his *Comparative View*, before quoted.

† Mr. Moss.

‡ It may be proper to notice in this place, the colour ſometimes given to an infant's ſtools, from a little blood it has repeatedly ſwallowed, when the nipples of the ſuckling mother have been very ſore; a circumſtance, indeed, that does not often occur, but has been alarm-

have been wont to occaſion no inconſiderable trouble. But ſhould this, or even an abſceſs take place, they are both far leſs diſtreſſing under proper management than has been uſually imagined.* However, ſhould the mother be unable to ſuckle, and a wet-nurſe be engaged, there can be no harm in putting the child to

alarming for want of the true cauſe being underſtood. The ſtools in this caſe will be of a ſtrange blackiſh colour, ſuch as have been noticed under the head of fever, and very ſimilar to the firſt ſtools of new-born infants.

* See a Treatiſe upon Ulcers before mentioned, in which the *milk-abſceſs*, and *ſore nipples* are fully conſidered, and a ſucceſsful, and eaſy method of treatment pointed out.

From motives of benevolence, I beg leave to mention here a new contrivance, which has ſucceeded ſo far beyond every former device, for defending the nipples, and enabling women to nouriſh their own children, that I cannot but wiſh to extend its advantages, by this public recommendation of the *Nipple-Shield*. It may be had of the ingenious contriver, Mrs. RELF, No. 12, *Bell's-Buildings*, *Saliſbury-Square*, *Fleet-Street*; or for families at a diſtance from *London*, by application to Mr. SAVIGNY, Surgeons Inſtrument-maker, in *King-Street*, *Covent-Garden*.

the

the breaſt, after it has taken a doſe or two of the opening medicine; or ſhould it be brought up by hand, and not eaſily kept quiet, a ſpoonful or two of water-gruel, ſweetened with a little Liſbon-ſugar or honey, may be given for this purpoſe, which will uſually ſet it aſleep; after which it will be ready for whatever culinary food ſhall be thought proper for it.

AND on this article, a vaſt croud of abſurdities open upon us at once; and many of them with the ſanction of cuſtom and authority. I ſhall firſt advert to the thickneſs of the food: and it has, indeed, been matter of wonder, how the cuſtom of ſtuffing new-born infants with bread could become ſo univerſal, or the idea firſt enter the mind of a parent, that ſuch heavy food could be fit for its nouriſhment. It would be well, that all who are intruſted with the management of children ſhould have more juſt ideas of the manner in which we are nouriſhed; and eſpecially, that it is not from the great quantity,

nor

nor from the quality of the food, abſtractedly conſidered. They may ſurely be led to conceive, that our nouriſhment ariſes from the uſe the ſtomach makes of the food it receives, which is to paſs through ſuch a change in digeſtion as renders it balſamic, and fit to renew the maſs of blood, which is daily waſted and conſumed. An improper kind, or too great a quantity taken at a time, or too haſtily, before the ſtomach has duly diſpoſed of its former contents, prevents this work of digeſtion, and by making bad juices, weakens inſtead of ſtrengthens the habit; and in the end produces Worms, Convulſions, Rickets, Scrofula, Slow Fevers, Purging and a fatal Maraſmus.

NATURE, it ſhould be conſidered, has provided only milk, for every animal adapted to draw it from the breaſt; and that of women is certainly amongſt the thineſt of them, but at the ſame time, far more nutritive than bread, and, probably, than any other milk, as it contains a greater proportion of ſaccharine

matter; * which is thought to be that quality in all our food which renders it nutricious. It is true, bread, as it requires more digeſtion, will lie longer on the ſtomach both of infants and adults; and hence, probably, becauſe it ſatisfies the preſent cravings, it has been conceived to afford a greater proportion of nouriſhment, though mixed up only with water, as it too frequently is, it is far leſs nutritive than has been imagined. Children ought to be frequently hungry, and as often ſupplied with light food, of which milk is really the moſt nouriſhing that we are acquainted with. This could never be doubted, but from its paſſing ſo quickly out of the ſtomach; on which account, indeed, though not the propereſt food for adults, employed at hard labour, and many hours from home, it is the fitteſt of all

* The ſugar, or ſalt, of human-milk is one third more in quantity, and its extract, or ſolid contents, is double as much as in cows. See the *Table* at the end of the *Introduction*.

for

for the ſedentary life of a tender infant, who cannot get that nouriſhment from bread or other ſolid food, of which the ſtomach of the adult is capable. It muſt have been for want of attending to this conſideration, that Dr. ARMSTRONG has ſaid ſo much in favour of bread and other thick victuals: which, by the bye, he began to make uſe of for his own children (from its ſucceſs in whom he has ventured to recommend it,) at the age of ſix or ſeven months; a matter very different from ſtuffing an infant with it almoſt as ſoon as it is born. For every thing the ſtomach cannot digeſt, it has been ſaid, may be juſtly conſidered as a poiſon, which if not puked up, or very ſoon voided by ſtool, may occaſion ſickneſs, gripes, what are called inward-fits, and all the train of bowel complaints, which may terminate in one or other of the evils juſt mentioned. And this I ſee almoſt daily exemplified; new-born infants after being ſo fed, and ſeemingly thriving

for a ſhort time, ſuddenly falling into a purging, or being carried off by fits.

MILK itſelf, (like all the other animal juices) is produced from food taken in by the mother; and is the richeſt part of it. It is in her ſtomach that the aliment is digeſted, which by a combination of powers in the chylopoëtic viſcera, is ſo far animalized as to be converted into a kind of white blood; from whence it has been obſerved, every animal body is daily recruited. Hence it is very apparent, that previous to an infant having acquired ſtrength enough to convert ſolid food into this wholeſome chyle, the parent, by this wiſe ſubſtitution in nature, has, in a great meaſure, previouſly, accompliſhed this work for the infant ſhe is to nouriſh. During infancy, therefore, both nature and reaſon moſt clearly point out the expediency of a milk diet;* but how long it

* Whether the parent be able to ſuckle her own child, or that office be performed by a hired-nurſe, is not here particularly conſidered. The deſign is only to

it ought to be perſevered in, or infants wholly confined to it, is not eaſily aſcertained, and will be further conſidered in its place, with a latitude that the queſtion demands. There is a period in life, indeed, to which this nutriment is more particularly adapted, both experience and theory demonſtrating it to be more ſuitable to young people than adults, as ARBUTHNOT has remarked; and it has been obſerved, that it does not appear, that the ſtomach of the cow will produce the ſame change upon milk, as that of the calf does, which is, therefore, conſtantly made uſe of in dairies, for ſeparating the curd from the whey.

It can ſcarcely be improper before I entirely quit the article of ſuckling, to relate a recent inſtance, and a remarkable

to prove that milk is in general the moſt proper food for an infant. Whether that, indeed, be prepared by its own mother, a nurſe, or by ſuch animals as the cow, or the aſs, is equally to the purpoſe: where the former cannot be had, the beſt, and moſt natural ſubſtitute, ſhould be provided.

one out of many, as a proof of the degree to which infants may pine for the breaſt, even to the great hazard of periſhing for the want of it, where the real cauſe of the diſeaſe is not ſuſpected. This little hiſtory will likewiſe further ſerve to illuſtrate the preference of human-milk which has been ſo ſtrongly inſiſted upon.

THE little infant alluded to was very healthy when it was three months old, and was then weaned on account of the illneſs of the wet-nurſe; but ſoon afterwards ceaſed to thrive, and had continual bowel complaints. At the age of nine months I was deſired to viſit it, and was informed that it ſlept very little, was almoſt inceſſantly crying, and had for many days brought up nearly all its food; was become very rickety, and had all the appearance of an infant almoſt ſtarved. Trial had been made of every kind of food, except the breaſt, and the child been many weeks under the care of an experienced apothecary; was conſtantly in a ſtate of purging,

purging, and ſeemed to have been juſt kept alive by art.

On the firſt ſight of the child, and upon the face of this account, it was very evident, that this infant was not nouriſhed by the food it received, and that the complaint lay wholly in the firſt-paſſages. But reduced as it was, I had little expectation from medicines; and therefore gave as my opinion that either the child ſtill pined for the breaſt, in which caſe, I doubted not, it would take it, though it had now been weaned ſix months; or, that it ought to be carried immediately into the country, and be ſupported for ſome time only upon aſſes milk, or perhaps be fed, now and then, with a little good broth.

My advice being taken, a good breaſt was procured, which the infant ſeized the moment it was put to it, and after ſucking ſufficiently, ſoon fell aſleep for ſeveral hours; waked without ſcreaming, and took the breaſt again. It is ſufficient to add, that the child ceaſed to puke or be purged, and recovered from that hour;

and after ſucking eight or nine months longer, became in the end a fine healthy child.

Although this inſtance has ſomething extraordinary in it in reſpect to the length of time the child had been taken from the breaſt; and though infants are generally completely weaned in ſix or ſeven days at the furtheſt; it is yet no uncommon thing for children, when ill, to take to it again, after ſeeming to be thoroughly weaned for three or four weeks. And this circumſtance is the more worthy of notice, as it ſometimes is a very fortunate one; and ſhould lead to making the trial whenever infants newly weaned may be ſeized with any complaint, under which a return to the breaſt may be uſeful. Such, particularly, is the hooping-cough; under which I have known a child of more than a year old, and apparently thoroughly weaned for a month, take to the breaſt of a ſtranger very cheerfully, in the preſence of its former nurſe, with the precaution only of leading it to make the firſt attempts

tempts during the night. Such children for the few firſt days turn away from the new wet-nurſe to their former one, as ſoon as they have ſatisfied themſelves at the breaſt, and go back to the nurſe again very readily whenever they find an inclination to ſuck.

To return; I am free then to lay it down as an axiom, that milk ought to be the chief part of the diet of infants for a certain time, whether it be breaſt-milk or any other; and that it will prove ſufficiently nouriſhing for nineteen out of twenty, I might perhaps ſay ninety-nine out of a hundred: exceptions, I believe, there may be, but much fewer children would periſh if no exception were to be made, than by abſurdly ruſhing into the contrary extreme. But ſuppoſing a very ſtrong child, at the end of the month, really not ſatisfied with milk only, and always craving the moment it has been thus fed, it, doubtleſs, may have a little boiled bread added to it, two or three times in the day; but I ſhould be very cautious

cautious of extending it further.* In the caſe, however, of an infant at the *breaſt*, if it be always craving as ſoon as it is taken from it, the occaſion of its craving will generally be found to be in the nurſe's milk; previouſly therefore to allowing a more ſolid food, the quality of the milk, as well as the ſtate of the nurſe's health ſhould be inquired into, and the milk be changed if its goodneſs be ſuſpected. Perhaps where bread and milk is allowed, whether at a very early or a later period, it would be an advantage to boil a piece of roll, together with the upper cruſt, in a good deal of water, till it is very ſoft, by which means the bread

* "In *Italy*, *Holland*, *Turkey*, and through the whole "*Levant*, children are rarely allowed any other food "than the breaſt-milk, during the firſt year:" (BUFFON) and the Savages in *Canada* ſuckle for four or five, and often ſix or ſeven years.—In ſome extreme northern climates (as hath been already remarked) we know they can have no other food, for a long time, and yet, there, the death of an infant is as rare an event as that of a ſuckling mother.

will

will part with ſome of its aceſcent quality; the water ſhould then be ſtrained off, and the bread mixed up with the milk, which ought to be boiled if the child is very young, or inclined to a purging.

It would, I perceive, lead me beyond all bounds to enter further into this matter; I ſhall therefore only add, that infants certainly ought not to be fed lying on their backs, but ſitting upright; as they will in this poſition ſwallow their food more eaſily, as well as more readily perceive when they have had enough. So alſo children nouriſhed at the breaſt, ought to be withdrawn from it for a ſhort time, eſpecially juſt after waking from a long ſleep; whereby, beſides other advantages, much undue labour to the ſtomach may be prevented, as well as enabling it to retain what it has received; a part of which very frequently is otherwiſe thrown up.

IF Milk be the proper food for infants brought up by hand, the next inquiry will naturally be, what milk is the beſt? and what

what is the fitteſt inſtrument for feeding with? And it is from long experience, as well as from reaſon and analogy, that I venture again to recommend the ingenious contrivance of the late Dr. HUGH SMITH, ſet forth ſome years ago in a treatiſe on the Management of Children, in a ſeries of letters addreſſed to married-women. The milk he likewiſe adviſes, is cows milk in preference to all others, as being the moſt nouriſhing, and therefore, in general, the moſt proper; and I wiſh to refer the inquiſitive reader to ſuch other reaſons as the Doctor has given, to which I can add nothing but my own experience of their validity. To the milk ſhould be added a little thin gruel, or barley-water, which forms a very ſmooth and pleaſant nouriſhment. A few weeks after birth, (and I think in general the ſooner the better) inſtead of the barley-water or gruel, there ſhould be mixed with the milk a ſmall quantity of a light jelly made from harts-horn ſhavings, boiled in water to the conſiſtence that veal broth acquires

acquires when it has ſtood to be cold.* The deſign of the jelly is obvious and rational, at once calculated to render the food more nutritive, as well as to correct, in ſome meaſure, the aceſcency of the milk; this quality being thought to abound in the milk of different animals, in proportion to the quantity of vegetables on which they feed.† And the milk of quadrupeds, we know, is produced from vegetable juices only, whilſt breaſt-milk is formed by a mixture of animal and vegetable food. A little Liſbon-ſugar may be added to this compound of jelly and milk, if the child be not inclined to a purging, or in that caſe a little loaf

* There is ſometimes a difficulty in making this jelly, on account of the harts-horn being bad; thoſe who ſhave it, often mixing with it the ſhavings of trotters, which may, however, be diſtinguiſhed by their brittleneſs. If the ſhavings are good, two ounces of them boiled very ſlowly in a quart of water to a pint, will make the jelly of a proper conſiſtence.

† See Dr. YOUNG, *De Natura et Uſu Lactis, in diverſis Animalibus.*

ſugar;

ſugar; but the leſs of either the better. It will be proper to have the milk and jelly warmed ſeparately, and no more at a time than may be wanted; when it ſhould be put into the ſmall pot Dr. SMITH has contrived for the purpoſe, which muſt be very carefully cleanſed and ſcalded, at leaſt once every day, and the ſpout be thoroughly rinſed, leſt any ſour curds ſhould ſtick about it; and to this end, it may be convenient to be provided with two.* At firſt the milk ought to be

* The objection to this mode of feeding, made by a writer at *Dover*, that the pot may often be left foul, and therefore the food become ſour, appears to me to be very far fetched; ſince if nurſes are not to be depended upon in matters of cleanlineſs, and the ſweetneſs of the food they are to adminiſter, we can truſt them in nothing, and infants muſt be continually ſuffering; there being a hundred particulars eſſential to children's health, in which ſervants cannot be always ſuperintended, but muſt be entirely confided in.

Having been often ſent to for a direction to the ſhops where the infant feeding-pot may be met with, I notice in this place that it is always kept at Mr. *Philips's* in Oxford-ſtreet, near Cavendiſh-ſquare; *Storer's* in Piccadilly, near to Park-lane, and at *Neale's Staffordſhire warehouſe* in St. Paul's Church-yard.

boiled,

boiled, to render it leſs opening, but when the child is ſeveral months old, or may chance to be coſtive, the milk need only be warmed. If it be freſh from the cow, and very rich, a portion of water may be added to it, whilſt the infant is very young. Indeed, it ought to be as new as poſſible, ſince milk, as an animal juice, probably contains ſome fine ſubtile particles, which evaporate upon its being long out of the body.

Though I have ſaid cows milk is uſually preferable to any other, it will be conceived, that I mean for infants who are ſtrong and healthy. Aſſes milk, on the other hand, being more ſuitable for many tender infants during the firſt three or four weeks, or perhaps for a longer time, as well as for children who are much purged; as it is thinner and having far leſs curd than any other milk, it ſits much lighter on the ſtomach, both of tender infants and adults. And, perhaps, it may be inferred, from the very different proportion of cream, and of cheeſy principles,

ciples, that the milks of different animals contain, that providence has rather conſidered the benefit of man than of the young of various quadrupeds; though, doubtleſs, the milk is likewiſe properly adapted to them.

In regard to the mode of feeding infants, I can ſay from experience, that for the delicate and tender at leaſt, the boat, the ſpoon, and the horn, are in no wiſe comparable to the pot; which is ſo contrived, not only as to pleaſe the child by its reſemblance to the nipple, and the milk coming ſlowly into its mouth, but alſo to afford the infant ſome little degree of labour, in order to acquire the quantity it needs, (which the horn does not;) by which means the food is alſo duly mixed with ſaliva. The like little fatigue takes place in children nouriſhed at the breaſt, and by this mean it is, that infants, eſpecially when very young, are not ſo apt to overſuck, as they are to be over-fed by the boat or the ſpoon, the food of which being ſweet and pleaſant, and requiring only

only the trouble, or rather the pleaſure of ſwallowing, the child is tempted to take too much at a time; whilſt the nurſe often forces down a ſecond or third boat-full, in order to put a ſtop to the cries, which indigeſtion from the former may have occaſioned.

THE writer juſt now alluded to, as well as Mr. LE FEBURE DE VILLEBRUNE detracts from the advantages of this mode of feeding, by obſerving, that infants may be fed as ſlowly and cautiouſly by the ſpoon: but the fact is, that this is, indeed, one of the things in which ſervants *cannot* be depended upon, whilſt there are ſuch temptations to the contrary, (at leaſt I have not met with many who could;*)

* Amongſt the exceptions I have met with, I was lately greatly pleaſed with a nurſe, who ſaid, "I always let my children *aſk* for their food;" which ſhe pertinently explained by ſaying, I do not feed infants becauſe they cry; but if, after faſting a reaſonable time, they begin to moan, I endeavour to amuſe them till they anxiouſly hunt about them, and repeatedly form their lips in a certain way, that aſſures me it is a want of food only that makes them complain.

nor will children, indeed, oftentimes endure ſlow feeding, if they can anywiſe prevent it, but will be ſcreaming all the while, inſtead of being kept quiet by their food: though the hope of quieting them, it has been obſerved, is frequently the nurſe's ſole motive for giving it. But when an infant *can* get it only ſlowly from the pot, and yet is itſelf all the while employed in the buſineſs, it will be agreeably diverted while it is acquiring its nouriſhment, in the ſame manner that it is amuſed at the breaſt.

The pot is formed in the ſhape of an Argyle, or gravy-pot, with a long ſpout, riſing from the bottom, and pierced only with a few ſmall holes at the end, which is to be covered with a piece of vellum, waſhing-leather, or parchment; which being left looſe a little way over the ſpout, is ſoft and pleaſant to the infant's mouth, and it has been ſaid, is nearly as acceptable to many children as the breaſt, as I have often been a witneſs.

This

This manner of feeding is not only pleaſant to the child but very convenient to the nurſe, and the food equally at hand in the night as the day, being eaſily kept warm by a lamp, or even in the bed. The only objection I have ever known made to it by thoſe who have made trial of it, is that which I eſteem one of its higheſt recommendations, which is, that children thus fed are frequently hungry, that is, they are what nature deſigned them to be; this food ſitting light on the ſtomach, and being eaſily digeſted, like the breaſt-milk, children often need a ſupply of it.

I SHALL juſt mention another popular objection to the plan here recommended. This is taken from ſome fine children we meet with, who have been brought up by hand from the birth, and fed with thick bread victuals all the day long, whilſt we every now and then ſee ſome of thoſe who have been debarred that ſort of diet, weak and tender till they become a year or two old. Not to ſtop here to obſerve, that this objection militates equally againſt children

living on the breaſt, though that is the food nature has deſigned for them, it will be ſufficient to ſay, that it is only ſtrong children who may be bred up almoſt anywiſe, that can at all digeſt thick victuals; that there are others who cannot endure the leaſt thickening in their food, nor any kind of bread; and that weakly infants, who are ſcarcely preſerved by the moſt careful attention to their food, would ſoon be hurried out of the world if that attention were withheld. And this reminds me of an obſervation of a very judicious friend in the north of England, which greatly ſurpriſed me at the time, as I had never met with any obſervation from him before, the propriety of which was not exceedingly obvious and convincing. Upon ſeeing a number of fine children one day in *London*, he with ſome ſhrewdneſs obſerved, that we did not ſeem to have ſo many weakly half-ſtarved children as he met with in the country, and that he had often before made the like obſervation in his journies to town. It appeared to me

that

that my friend muſt lie under ſome miſtake, and I accordingly mentioned my ſurpriſe at ſuch a remark coming from him; when he removed my aſtoniſhment by inſiſting on the fact, with the following obvious ſolution of it. I apprehend, ſays he, there are ſcarcely any but fine and ſtrong children in *London*, who live to be two or three years old, the weaker ones, for want of good air, and exerciſe, ſinking under their infirmities; whilſt the tendereſt children in the country by being turned out to crawl in the wholeſome open air, or by ſitting at the door almoſt all the day, eſcape the fatality of your groſs air and warm nurſeries, and ſurvive the trying periods of infancy, though ſome of them remain weak and rickety till they become old enough to endure ſevere exerciſe, which can alone ſtrengthen them effectually.

I HAVE no doubt of there being certain exceptions to the mode of feeding I have recommended, that are worthy of more attention, although very few have actually

come to my knowledge, and though I am perſuaded, that as a *general* plan, it is both a natural and ſalutary one. Inſtances may be met with, however, of ſome very athletic children who may require a more nouriſhing, and perhaps ſomewhat more ſolid diet; and the ſtate of bowels in others, will call for a greater variety of food, and of a kind not calculated to be adminiſtered in the mode here recommended, as hath been already noticed under the head of purging. On theſe accounts, I would offer another obſervation or two in regard to the thicker kind of victuals; and firſt, that in families accuſtomed to bring up their children by the ſpoon, I think I have found a greater number of infants well nouriſhed by the French, or the Uxbridge-roll boiled in water to a jelly, and afterwards diluted with milk, than on any other kind of pap. From ſuch families I have likewiſe learned, that ſome *change* in the food is, however, frequently neceſſary, and will be indicated by the degree of

reliſh

reliſh which the infant may diſcover towards different kinds of food, as well as by their effects on the bowels; though the child be not ſuppoſed to be at ſuch times really unwell. Such changes principally reſpect the *different kinds* of bread, or other farinaceous ſubſtance uſually mixed with milk, and ſometimes the ſubſtitution of broth, for a few days, in the place of the latter.

WHEN children brought up by hand become four or five months old, eſpecially if ſtrong and healthy, they may, doubtleſs, be allowed a thicker kind of victuals, becauſe their digeſtive powers being by this time become ſtronger, they are able to extract good nouriſhment from it; though this change is not equally neceſſary for children brought up at the breaſt, at leaſt, ſuch do not require it ſo early; breaſt-milk being more nouriſhing than any other. The firſt addition of this kind, however, whenever it becomes neceſſary, I am perſuaded, ought to be beef-tea or

broth,* which with a little bread beat up in it in the form of panada, will be at once an agreeable and wholeſome change, and prepare them for further advances in this way. But as this cannot well be given oftener than two or three times a day, a little bread and milk may alſo be allowed them every morning and evening, as their ſtrength and circumſtances may require. A cruſt of bread likewiſe, as ſoon as the child has a couple of teeth, will amuſe and nouriſh it, whilſt it will aſſiſt the cutting of the reſt, as well as carry down a certain quantity of the ſaliva; a ſecretion too precious to be loſt, when the digeſtive powers are to be further employed. As the child grows older, to broth may be added light puddings, made of bread,

* "I cannot help remarking here, that the gravy "of beef or mutton, not over roaſted, and without "fat, properly diluted with water, is the wholeſomeſt "and moſt natural, as well as nouriſhing broth that can "be made." Dr. HUGH SMITH.

ſemolina,

ſemolina, tapioca,* or rice; ſalep boiled in milk, and ſuch like. But to feed a child with veal, chicken, or other animal food, before nature hath given it teeth enough to chew it; howſoever ſmall it may be minced in the kitchen; is altogether as unnatural,† and can prove nouriſhing only to ſuch children, as from the great ſtrength of their natural conſtitution, need leaſt of all the aſſiſtance of art. It is by degrees only, that children ought

* The beſt *tapioca*, I believe, comes from the *French Weſt-India Iſlands*, and is called by the general term, *farine*. It is in very common uſe alſo in our *Weſt-India Iſlands*, where it is made into thin cakes, and is called *caſſada*: ‡ in this form, therefore, it is moſt likely to be genuine, and may be preſerved for a very long time.—Two ounces of *tapioca* ſhould be boiled ſlowly in three pints of water, to a quart, and be then paſſed through a ſieve: a little milk being added, or not, as circumſtances may direct.

† Ante dentium eruptionem non conveniunt cibi ſolidiores. Ideo natura quæ nihil fruſtrà facit, & non deficit in neceſſariis, dentes ipſis denegavit, ſed lac conceſſit, quod maſticatione non eget. PRIMROS.

‡ The *Satropha Manibot* of LINNÆUS.

to

to be brought to ſuch food; which at a certain period, indeed, is as neceſſary as a light diet at an earlier age. For it is certain, that the error of ſome parents runs the contrary way, and their children are kept too long upon a fluid, or too ſlender diet; whence their bellies and joints become enlarged, and the bones of the lower extremities too weak to ſupport them, at an age when they want more exerciſe than their nurſes can give them. For when they go alone, not only is a little light meat and certain vegetables to be allowed them once a day, or alternately, with broths, puddings, or blamange, white-pot, cuſtards, and ſuch like kitchen preparations of milk,* but even a little red wine is beneficial to many conſtitutions. This will not only promote digeſtion, and obviate in great meaſure a diſpoſition to worms, but by ſtrengthening the habit, will alſo render children

* "Infancy and childhood demand thin, copious, nouriſhing aliment." ARBUTHNOT, *On Aliments.*

leſs

leſs liable to become rickety, at the very period they are very much diſpoſed to it. Such a plan is the rather inſiſted upon, becauſe ſome parents the moſt deſirous of doing right, fall into a like miſtake even in regard to older children, whom they keep too low, allowing animal food only every other day to thoſe of four or five years of age; which, unleſs in very particular habits, is ſurely an error, at leaſt in this damp climate; and diſpoſes to ſcrofula. But ſo many little infants, on the other hand, fall a ſacrifice to the uſe of indigeſtible food under the age of ſix months, being carried off by vomiting, purging, or fits, that whoever would preſerve them over the moſt dangerous period of infancy, cannot too cautiouſly attend to their diet at this time.*

IT

* From a note in Dr. SMITH's letters it appears, that the average of births annually, within the bills of mortality, for ten ſucceſſive years, was 16,283; out of which were buried under *five* years of age 10,145, and from amongſt theſe 7,987 were under *two* years. So that

IT is a common direction in works of this kind, to point out the propereſt times for feeding an infant brought up by hand, and to direct how often it may ſafely be fed. I ſhall juſt obſerve therefore, that no adequate rules, can be laid down on the occaſion, and on that account none ought to be attempted, ſince none can

that almoſt *two thirds* of the children born in *London* and its *environs*, become loſt to ſociety, and more than *three fourths* of theſe die under *two years of age*.—This proves how hazardous a period that of infancy is, in this country; and I am ſorry there is ſo much reaſon to be perſuaded, that the want of air, exerciſe, and a proper diet, has added, unneceſſarily, to its dangers; there being no ſuch mortality in barbarous nations, whoſe inhabitants live in a ſtate of nature, nor in any part of the known world, amongſt other young animals.—Although theſe, and other calculations I have ſeen, ſhould be found ever ſo accurate, it is a pleaſant reflection, (to whatſoever the circumſtance may be owing) that ſince the time they were taken, the proportion of deaths at the early period above alluded to, has been very conſiderably decreaſing; and the writer has noticed, that for ſome years the average of deaths, according to theſe bills, has not been more than *ſix* in *ſixteen*; which is but little more than *one third*.

be

be ſufficiently comprehenſive; and I am happy in not being at all at a loſs in this inſtance wherein writers have differed ſo widely. For infants not uſually taking too much at a time in the manner of feeding that has been recommended, on account of the little fatigue which, it was obſerved, they undergo in acquiring their nouriſhment, may generally be permitted to partake of it as often as they might of the breaſt.* This is, however, by no means the caſe, when children are allowed to eat thick victuals, and are fed by the ſpoon, by which, it has been ſaid, they are always in danger of taking too much; an evil that cannot be too often pointed out.

BEFORE I cloſe this head of the management of children, perhaps the moſt important of all, I ſhall point out the moſt ſuitable diet under the different complaints to which they are moſt liable. And after the hints that have been thrown out

* Optimum vero medicamentum eſt opportunè cibus datus. CELSUS. *De Med.*

through

through the former part of this work, I need only obſerve, that as light a diet as is poſſible is uſually called for when a child is unwell, let the diſorder be almoſt whatever it may. If a fever ſhould accompany it, the child will require ſtill leſs food than in any other complaint, but plenty of drinks; which may alſo be ſo calculated as to furniſh nearly as much nouriſhment as the infant will require, and may in ſummer-time be given cold. Such are barley-water, water in which a crüſt of bread has been boiled, and thin tapioca; or if a purging attends, rice-water, and a drink made of harts-horn ſhavings, with a little baked flour in it. In this complaint, wherein more nouriſhment is required to ſupport the child than under moſt others, (if not attended with fever,) baked flour mixed up with boiled milk, (as mentioned under the article of purging) is admirably calculated both as a proper diet and medicine; and if kept in a dry place, may be preſerved fit for uſe for a conſiderable time. For the like complaint,

plaint, arrow-root, or the food directed by Dr. SMITH is very well adapted, and will afford a little variety. He orders a table-ſpoonful of ground rice to be boiled with a little cinnamon, in half a pint of water, till the water is nearly conſumed; a pint of milk is then to be added to it, and the whole to ſimmer for five minutes: it is afterwards to be ſtrained through a lawn ſieve, and made palatable with a little ſugar. In this way, or joined with baked flour, as mentioned above, milk may generally be made to agree perfectly well, even when the bowels are purged; and when it does ſo, proves exceedingly nouriſhing. Should it chance to diſagree, owing to the great acidity of the firſt-paſſages, good beef-broth ought to be made trial of, which may be thickened with baked flour, inſtead of bread, and makes a very pleaſant, as well as anti-aceſcent diet. Likewiſe the patent ſago, properly boiled, adding to every half-pint a large tea-ſpoonful of red Port wine, for the uſe of infants of a week old; cautiouſly

cautiouſly increaſing the quantity of wine, as they grow older. A large family of children whoſe bowels had been continually diſordered by various other food, has been brought up by this, which was perſevered in till they had four, or more teeth, and were able to partake of pudding and other common food.

PERHAPS much more has been ſaid on the ſubject of acidity, by ſome writers, than really ought to have been, or it may at leaſt be ſuſpected, that a proper attention has not been paid to the peculiar circumſtances of infants, who are all much diſpoſed to it. Acidity when injurious, is, probably, oftentimes rather an effect, than the firſt cauſe of the diſorders of infants. It ſeems, indeed, to be natural to them, ariſing alike from the weakneſs of their organs of digeſtion, and the nature of their food; though there is no doubt, that their complaints are afterwards aggravated by an abounding acid, or rather, probably, from this natural acid becoming morbidly acrid, through over-feeding,

and

and other errors in their diet, or from its being accidentally confined in the firſt-paſſages. Nature, however, ſeems to have deſigned the food of infants to be aceſcent, and till the body be diſordered, and digeſtion hurt from one cauſe or other,* this quality of their food is not likely to be very injurious to them, and, probably, far leſs ſo than food of a very alcaline nature would be, with a like weak digeſtion. It is true, indeed, that as many ſimilar complaints in adults, who feed on different diets, will, cæteris paribus, have their varieties, and each have ſome relation to the different qualities of their food; ſo it is not to be wondered at, that the complaints of infants ſhould be attended with wind and other marks of acidity, which in adults are uſually the leaſt hurtful of all; and are, indeed, for

* Such cauſe, it has been obſerved, may be an over quantity, or too ſweet a food, or heavy and indigeſtible diet; which, indeed, prove more frequent occaſions of a diſtempered acidity, than any thing elſe.

the moſt part, pretty eaſily corrected in children, while that is the only complaint. When they are much troubled with wind therefore, it cannot be wrong to mix ſome carminative ſeeds, or the waters diſtilled from them, now and then, with their food, ſuch as ſweet fennel, or cardamom ſeeds, bruiſed very fine; but the aq. anæthi is that I have generally recommended, and being a liquid, is always ready to be added to the food, without loſs of time. But though ſuch an occaſional addition to their food is often exceedingly uſeful, I cannot help ſpeaking againſt its being made a conſtant practice, by which children not only ſuffer when by accident, or abſence from home, it has been neglected, but it deſtroys the very end for which it was uſed, by the ſtomach becoming accuſtomed to it.

Children, however, become leſs ſubject to wind and hurtful acidities as they grow older, and the ſtomach gets ſtronger, as it is called. But ſhould theſe complaints, notwithſtanding, continue obſti-

nate,

nate, a little fine powder of chamomile flowers, or a few drops of tinctura columbæ, mixed in water, and warmed with a little ginger, will prove exceedingly bracing to the ſtomach and bowels, and render them leſs diſpoſed to acidity. Exerciſe alſo according to the age and ſtrength, is a grand preſervative and remedy, and eſpecially making infants break wind after ſucking or feeding. And this may generally be effected, as every one knows, by raiſing the infant up, and gently tapping it on the back, or rubbing its ſtomach, before it be laid in the cradle to ſleep.

I ſhall only add further, that when milk is frequently thrown up curdled, a little prepared oyſter-ſhell powder may be added to it, or a very ſmall quantity of almond-ſoap, or of common ſalt, which will not at all injure the flavour, and will prevent this change happening too ſoon in the ſtomach.

I SHALL now close this head, with some observations relating to Wet-nurses, and to Weaning.

The first and essential point in a wet-nurse is, doubtless, that her milk be good; to which end it is necessary she be healthy and young, not of weak nerves, nor disposed to menstruate whilst she gives suck, and that her bowels be rather costive than otherwise. Her nipples should be small, but not short, and the breast prominent, and rather oblong than large; such distention being rather from fat, than from milk. The chief marks of good milk, are its being thin, of a bluish colour, rather sweet, and in great quantity; and if under six months old, it is, doubtless, an advantage. And this is of more consequence, than it seems of late years to be thought; for after this time it generally becomes too thick for a new-born infant, and is not easily digested. On this account, though an infant may not be really ill, I have frequently observed it not

not to thrive, though it take great plenty of ſuch milk.—A wet-nurſe ought to have good teeth, at leaſt, her gums ſhould be ſound, and of a florid colour. She muſt be perfectly ſober, and rather averſe from ſtrong liquors; which young and healthy people ſeldom need in order to their having plenty of milk. She ſhould be cleanly in her perſon, good-tempered, careful, fond of children, and watchful in the night, or at leaſt, not liable to ſuffer in her health from being robbed of her ſleep.

THE diet proper for wet-nurſes is likewiſe worthy of notice. And here, an invariable attention ſhould be paid to natural conſtitution and habit. Due allowance being made for theſe, it may be ſaid, that milk, broth, and plain white ſoups; plain puddings, fleſh meats of eaſy digeſtion, and a due mixture of vegetables; with plenty of diluting drinks, and ſuch proportion of more generous liquors, (ſpirits excepted) as the variety of circumſtances ſhall direct, will be a proper diet for ſuckling women. Reſpecting ve-

getables particularly, the ſtricteſt regard ſhould be had to conſtitution and habit. Wherever vegetables, or even acids, uniformly agree with the ſuckling parent or nurſe, I believe healthy children will rarely ſuffer by her partaking of them; but on the contrary, the milk being thereby rendered thin and cooling, will prove more nouriſhing and ſalutary, in conſequence of being eaſier of digeſtion. To theſe regulations ſhould be added an attention to exerciſe, and frequent walks in the open air: to theſe, hired wet-nurſes have been previouſly accuſtomed, and are therefore ſure to ſuffer by confinement to warm rooms, equally to the injury of their own health, and of the infants they ſuckle.

I COME now to the article of weaning of children; the proper age for which will depend greatly upon attending circumſtances. A child ought to be in good health, eſpecially in regard to its bowels; and, doubtleſs, ought firſt to have cut, at leaſt, four of its teeth. This ſeldom takes place till it is near a twelvemonth old;

old; and it may be obſerved, that healthy women who ſuckle their own children, and take proper exerciſe, do not uſually become pregnant again in leſs time. We ſhall not be very wide, therefore, of the order of nature, if we ſay that children in general ought not to be weaned much earlier than this; making proper allowances, however, for all juſt exceptions to general rules,* and eſpecially as far as teething may be concerned.—Small and weakly infants, if rather feeble than ill, are oftentimes benefited by being weaned; they ſhould therefore, about this age, be taken from the breaſt, inſtead of being, on account of weakneſs, nouriſhed much longer in that way: a trial of ſuch a change ſhould, at leaſt, in moſt inſtances be made.

ANY preparation for weaning is generally needleſs, and eſpecially that of feeding children before-hand, though made a

* ASTRUC adviſes children to be ſuckled till they are two years old; but without giving any ſufficient reaſons.

common excuſe for ſtuffing them whilſt at the breaſt with indigeſtible food. I have ſeen many mothers needleſsly torturing themſelves with the fear of their children being weaned with difficulty, becauſe they could not get them to feed when eight or ten months old, and ſtill at the breaſt; but I have always found ſuch children wean, and feed juſt as well as others, when once taken wholly from it. I, therefore, never have any fear in that reſpect, and therefore wiſh to counteract, if poſſible, a ſentiment encouraged by ſeveral writers, which has, I believe, no real foundation in fact, but has too often been productive both of much inconvenience and miſchief. But I do not by this intend to ſay, that a child of eight or ten months old would be injured, or oftentimes not benefited, by a little food, once a day, of a more ſolid nature than the breaſt-milk, as, indeed, I have intimated before; but when children happen to be weaned much earlier, and are fed almoſt from the birth merely with that view,

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(which is often the caſe) they may be eſſentially injured by it.

It has been remarked, that infants who are indiſpoſed to feed at all while at the breaſt, are nevertheleſs weaned, and feed juſt as well as others, when once taken wholly from it. There is, indeed, in a few children a little difficulty for the firſt two or three days under any circumſtances; but it is remarkable, that the inſtance attended with the greateſt averſion to common food, that I ever witneſſed, was in an infant who had been allowed a little chicken broth once a day for two months before the weaning was entered upon. This child was very healthy, ſlept well, and ſcarcely cried at all upon being taken from the breaſt, and yet would not receive even the food it had been accuſtomed to; ſo that for ſix and thirty hours, it continued averſe from every thing that was offered to it, though it appeared in very good humour. After the ſecond day, however, it took a moderate breakfaſt,

and

and in a little time it fed as readily as other weaned children.

Under ſuch circumſtances, if the infant be in the leaſt degree coſtive, a little magneſia and rhubarb ſhould be adminiſtered, which beſides opening the bowels, will tend to create an appetite. Such infants alſo, where there are more children in the family, ſhould ſit at table with them when taking their meals; as they will thereby, through mere imitation, be diſpoſed to take food.

When the weaning is once entered upon, a great part of their food ought ſtill to be of milk, with puddings, broths, and but little meat; and every kind of food, and even drink ſhould be prohibited in the night, even from the firſt, ſuppoſing them to be weaned at a proper age. The mere giving them drink, even only for a few nights, creates the pain and trouble of two weanings inſtead of one, and if it be continued much longer, it not only breaks the reſt, but the child will acquire a habit of

of being fond of drinking; the conſequence of which very often is a large belly, weak bowels, general debility, lax joints, and all the ſymptoms of rickets. The child need only be fed the laſt thing before the nurſe goes to bed, which may generally be done without waking it; and whilſt the child ſeems to enjoy this ſleepy meal, it becomes a moſt pleaſant employment to the mother, or nurſe, from obſerving how greedily the child takes its food, and how ſatisfied it will lie for many hours on the ſtrength of this meal;—the mention of which naturally leads to the conſideration of the next Article propoſed, viz.

## SLEEP *and* WATCHING.

AFTER what has been already advanced on this article, under the head of their Complaints, only a few obſervations will be neceſſary in this place; and firſt, that healthy children ſleep a great deal for the firſt three

three or four days after they are born, probably from having been previouſly accuſtomed to it. They ought not, however, to be ſuffered to continue this habit in the day time, to the degree ſome children are permitted, but ſhould be gradually broken of it; and indeed if not indulged, they will not be ſo much diſpoſed to ſleep as is generally imagined, and will therefore take more reſt in the night; which is mutually beneficial to the child and the mother, if ſhe be in the ſame room, who eſpecially if ſhe ſuckles, will be leſs diſturbed, at a time when ſhe particularly requires this refreſhment.

Therefore, when infants are ſleepleſs in the night, they ſhould be kept more awake, and have as much exerciſe as poſſible in the day time, which though they be ever ſo young may be pretty conſiderable, (as will be directed more at large in its place,) by playing with them, or dandling on the knee, and otherwiſe amuſing them; and when older, by every kind of exerciſe they can bear. The child, if healthy,

thy, will ſoon contract a habit of being very much awake while it is light, through that lively and reſtleſs ſpirit peculiar to infancy; and by this means, another evil will be very much avoided, that of often laying a child down to ſleep in the day time, for hours together, loaded with a thick dreſs, and covered beſides with heavy clothes in a ſoft cradle, or bed.

But though I am confident theſe cautions will have their uſe, I am equally ſatisfied that many children have much leſs ſleep than they require; but then this deficiency is chiefly in the night, and is often the conſequence of ſome complaints which the child labours under. Upon theſe, however, ſufficient has already been ſaid in the former volumes, to which therefore the reader is referred.

BEFORE I quit this article, it may be remarked, that the cuſtom of conſtantly placing infants on their backs, whether in the cradle or bed, is very improper; for by this means, the ſuperfluous humour ſecreted in the mouth, which, in the time

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of teething eſpecially, is very conſiderable, cannot be freely diſcharged, and muſt fall down into the ſtomach, where its abundance occaſions various diſorders.* Infants ſhould therefore be frequently laid on their ſides, particularly the right, as favourable to the ſtomach getting eaſily rid of its contents; to which ſide alſo children, when ſtrong enough, will inſtinctively turn, if not prevented by the weight or confinement of their own clothes, or thoſe of the cradle, or bed. The chief apology for all which, is a fear of the infant's falling, or turning on its face; but this is rather an apology for the neglect of that neceſſary attention to children, which whenever it can be commanded, ſhould never be ſpared them.

IT only remains, under this article, to ſay ſomething of the Cradle, which moſt writers have ſpoken againſt. I believe, there is no doubt but the cuſtom of laying children down awake, and rocking

* *See vol.* 1, *page* 6.

them

them in a cradle in the day time, or at ſeven or eight o'clock in the evening, when they are to go into their night's ſleep, as it is called, may be an occaſion of making them more wakeful in the night; or at leaſt may cauſe them to expect that kind of motion whenever they awake. But yet I cannot help thinking, there is ſomething ſo truly natural, as well as pleaſant, in the wavy motion of a cradle, (when made made uſe of at proper times) and ſo like what all children are uſed to before they are born; being then ſuſpended and accuſtomed to ride, as it were, or be gently ſwung in a ſoft fluid, upon every motion of the mother, and even during her ſleep, from the effects of reſpiration; that always wiſhing to follow nature as I do, I cannot, on the whole, but give an opinion rather in favour of the cradle. It is, at leaſt, among the *little* things in which we may harmleſsly err, and in which every mother may therefore be ſafely guided by her own opinion, or even by her feelings.

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And if the child in conſequence of being ſometimes rocked to ſleep in the day time, ſhall expect it when it awakes in the night, it will not be very difficult to find a ſubſtitute for it; and indeed parents ſeem, as it were by inſtinct, to pat and gently move a child, whether lying on the lap or the arm, whenever it appears to awake prematurely. The objections to the cradle made by ſome late writers, militate only againſt the abuſe of it, from any violent rocking; as though infants muſt neceſſarily be jumbled in a cradle like travellers in a mail-coach. For I cannot eaſily perſuade myſelf, that we are in every thing become ſo much wiſer than our fore-fathers; with whom for ſome ages, and in diſtant countries, amongſt rich and poor, the cradle has been judged to be a neceſſary part of family furniture. And in regard to watchfulneſs, as was obſerved in another place, it is uſually a mere ſymptom, and ſhould be treated according to its cauſe; but in a general way it may be ſaid, that nothing can ſo ſafely

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and effectually contribute to procure natural reſt as that exerciſe to be further conſidered under the next head.

## MOTION *and* REST.

IT is chiefly the former of theſe that will claim our attention, as infants ought ſcarcely ever to be in a quieſcent poſture, except when aſleep; and happy for them, that active principle with which nature hath endowed them, is ſo vigorous and overflowing, that they will hardly ſubmit to it. Exerciſe, like air, is indeed of ſo much importance to children, that they cannot poſſibly be truly healthy without it; care only ſhould be taken that it be properly ſuited to their age.

THE firſt kind of exerciſe, it has been ſaid, conſiſts in dandling, as it is called, patting the back after feeding, and gently raiſing the child up and down in the arms; taking care at firſt not to toſs it very high, infants being very early ſuſceptible of fear, and even capable of being thrown into

fits by it. Another exercise adapted to this tender age, and of the utmost advantage, is rubbing them with the hand. This should be done *all over*, at least twice a day, when they are dressed and undressed, and especially, as noticed before, along the whole course of the spine; and ought to be continued for some time, being peculiarly agreeable to the child, as it constantly testifies by stretching out its little limbs, and pushing them against the hand, with a smile expressive of the satisfaction it receives from it. Such gentle exercise may be partially repeated every time the child's cloths are changed, by rubbing the lower limbs, and every other part within reach. Likewise dashing the face with cold water, in the manner recommended for the rickets,* but more lightly, will produce the effects of exercise well adapted to this age.

When children are older, their exercise should be proportionally increased, and as has been observed, they ought never to

* Vol. I, page 343.

be

be carried in a quieſcent poſture, but the arm that ſupports them ſhould be continually in ſuch motion as the nurſe is able to continue. For children, it has been noticed, delight to be in conſtant motion; and this exuberant activity is given them for the wiſeſt purpoſes, and ought by no means to be counteracted. And I notice the mode of carrying them, becauſe I have ſeen children ſlung careleſsly over the arm in ſuch a manner, as neither affords a child any exerciſe, nor allows it to give any motion to itſelf; which a lively child will always endeavour to do. And, indeed, the manner of carrying an infant is of more importance than is generally imagined, for from it, the child will contract a habit, good or bad, that it will not readily give up, and may be as much diſpoſed to become rickety by improper management in the arms, as if it were lying wet in the cradle; the ill effects of which have been pointed out already.

IT may be a proper inquiry in this place, at what age children ſhould be put on their feet, a point on which people have differed conſiderably; but I apprehend nothing more is required than to follow nature, whoſe progreſs is always gradual, as our imitations of her ſhould be, and we ſhall then ſeldom run very wide of her intentions. If we take notice of a healthy child, it has been ſaid, we ſhall obſerve it to be always in motion, and as ſoon as it gets ſtrength, it will be ſupporting itſelf by the help of its hands and feet, and be crawling about wherever it is permitted. From this exerciſe, it will ſoon acquire an increaſe of ſtrength, and whenever it is upheld by the arms, and diſentangled from the weight of its clothes at the time of dreſſing and undreſſing, it will naturally walk up the waiſt of its mother, or nurſe; and by this manner of moving its limbs, and its bearing more or leſs on the arms, will ſhew what advances it has made. Whenever it is ſtrong enough, it will have attained ſufficient

ficient knowledge to walk by itſelf, and will never attempt it till it is fully equal to the taſk. It will then be perfectly ſafe to permit it to follow its inclination, at leaſt as far as the ſtraitneſs of its limbs is concerned; and I think I may defy any one to produce a ſingle inſtance of a child getting crooked legs, from being ſuffered to walk as ſoon as it has been diſpoſed to make the attempt. But no wiſe ought Nature to be forced; a maxim applicable to every other occaſion; "aware, (as a writer before quoted,* finely obſerves,) that whatever forms may, by artifice, be intruded upon her, and ſhe compelled to aſſume, to enlarge or contract her bias and inclination, ſhe can never be made, eventually, to deviate without manifeſt injury to herſelf, from the ſtation and bounds unalterably impreſſed upon her by the unerring Power, which firſt created and gave her laws."—But the miſchief is, we lead on children prematurely to the trial, by back-ſtrings, and goe-carts, and

* Mr. Moss.

other contrivances, calculated only to ſpare idle nurſery-maids, or what is really pitiable, to allow poor people time to attend to other concerns, who are obliged to work for their bread. But where this is not the caſe, ſuch contrivances are unpardonable, and are the conſequence of ignorance, or idleneſs, which are productive of great evils; and then by way of excuſe it is aſked, at what age a child may be put on its feet—A queſtion, I apprehend, that ought to be replied to only in the manner I have done*—Leave children to themſelves, and they will afford a ſatisfactory anſwer in good time.

It is ſaid, however, by a ſenſible writer,† that children's legs do not become crooked by putting them too early on their feet, and he aſks if any other animal has crooked legs, though they ſtand on

* I have ſeen a child walking alone before it has been nine months old, and at ten months, carrying a heavy play-thing in its hands, whilſt other children, rendered weak and rickety by miſmanagement, have been unable to do half as much at two years of age.

† Dr. HUGH SMITH, *Letters to married-women.*

them

them almoſt as ſoon as they are born. But the caſes, I apprehend, are widely different; quadrupeds and fowls are deſigned by nature to be early on their legs, and it is neceſſary they ſhould be ſo. They are accordingly calculated for it, their bones being ſtrongly oſſified from the birth; but this is, by no means, the caſe with the human ſpecies, and therefore no argument can be founded upon it without conſiderable latitude, and making ſuch allowances for the different circumſtances of children as have been pointed out. But if it be meant only to ſuffer children *to feel their way*, if I may ſo ſpeak, for themſelves, they will never deceive us, nor do I think their limbs ever become crooked, but by urging them to it by contrivances of our own, for which poverty is the only apology that can poſſibly be offered.

A NOTE of Dr. BUCHAN on the ſubject of giving exerciſe to children, which ſome people from their poverty cannot ſpare time to afford them, charmed me

exceedingly. The good ſenſe and philanthropy manifeſted in it, as well as a deſire of extending its uſeful contents, will I hope be apology ſufficient for tranſcribing it, eſpecially as it is at preſent ſo appoſite to my purpoſe. And though I cannot flatter myſelf that Government, however benevolently diſpoſed, will, or perhaps can, at this time, adopt ſuch a plan, either from his recommendation or mine, it is, nevertheleſs, in the power of people of large fortune, both in town and country, to give it very conſiderable influence, eſpecially if the premium were made double for ſuch children as ſhould be produced in good health. The Doctor's words are,

" If it were made the intereſt of the " poor to keep their children alive, we " ſhould loſe very few of them. A ſmall " premium given every year to each poor " family, for every child they have alive " at the year's end, would ſave more in- " fants lives than if the whole revenue of " the crown were expended on hoſpitals

" for

" for that purpoſe. This would make the " poor eſteem fertility a bleſſing, whereas " many of them think it the greateſt " curſe that can befall them ;" and I may add, I have known them expreſs great thankfulneſs, when any of their children have died.

THE advice contained in this chapter is further worthy of ſerious attention from late diſcoveries of a much greater fatality amongſt the children of the poor of this metropolis than I ever ſuſpected.

To aſcertain the fact, an inquiry has been for ſome time ſet on foot, at the *Britiſh lying-in Hoſpital,* at the ſuggeſtion of my colleague, Dr. COMBE. Inquiries have likewiſe been making ever ſince in different ways: and I have no reaſon to ſuſpect that the ſtatement made out from the report of the women offering themſelves at the Hoſpital, is at all beyond the fatality in other poor families in *London,* but, indeed, rather under it, in regard to ſtill poorer people.

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THE following is a brief ſtatement of the reſult of the inveſtigation at the hoſpital, during the firſt year:

Several women who had borne

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| 11 | - - - - - - - - | 8 and 10 |
| 12 | - - - - - - - - | 10 and 11 |
| 14 | - - - - - - - - - | 11 and |

ſeveral of the mothers of different numbers had loſt them all.

During another long period, only one woman having borne as many as five children, had reared them all; and one having had twelve, had *eight* living. But ſome having had four, had loſt *three*; and five, had loſt *four*; and ſix, *five*; and ſeven, *ſix*; and eight, *ſix* and *ſeven*; and ten,

ten, *ſeven* and *nine*; and women having borne eleven and twelve, had loſt *eight*, *nine* and *ten*; and fourteen, *eight*: with many who had borne four, five, and ſix, and one twelve, had buried them all.—In addition to this, may be remarked the ſad and rickety ſtate of many of the ſurviving children.

THE above, indeed, contains the moſt formidable view of this matter, but the moſt favourable is, by no means, ſuch as to counter-balance it; there being during a year and a half, no more than three women, I think, who having borne only three children; and one woman, (lately come from the country) with four children, who had loſt none of them. Only one having had as many as ſix, had them all living; and another, who had preſerved eight children out of ten. Amongſt the ſurviving ones, however, it was frequently obſerved, was the laſt born; therefore one leſs likely to be reared than an older child.

From

From theſe different degrees of fatality further contraſted with the ſmall number of deaths in the *hoſpital*, within the month,* we may ſuſpect the different care and attention beſtowed upon young children, as well as the want of certain accommodations; and may fairly argue on their effects.

IT would be unpardonable not to add a few words in this place with a peculiar reference to *females*; upon whom beſide every infirmity common to the other ſex, is impoſed the painful taſk of child-bearing. It is the benefit of the lower claſs of people, indeed, that I have here principally in view; though the caution is not utterly unneceſſary elſewhere.—The many diſtreſſing, and ſometimes fatal labours I have been witneſs to, have led me to regard with a kind of horror a rickety, diſtorted female infant, whoſe parents or nurſe's neglect, or ignorance, is heaping up for it additional ſufferings and dangers,

* See the *Introduction* to this volume.

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to thoſe which are great enough under every advantage that art, and good health can contribute.

FROM the age of two years therefore, or rather earlier, this care is eſpecially called for; and beſides every caution already pointed out, lays a ſtrict prohibition on girls being ſuffered to ſit, for hours together, on a low ſeat, whereby the pelvis is preſſed between the lower extremities and the ſpine, and is made to grow out of its natural form. The conſequences of this change of figure, if it be anywiſe conſiderable, cannot fail to be productive of increaſed pain and dangers in parturition, frequently equally fatal both to the parent and her offspring.

I am aware, that many poor people are not in circumſtances to give their children all the exerciſe they require; they may, however, ſuffer them to afford as much as poſſible to themſelves, by allowing them to crawl about on the floor, near an open window or door, inſtead of compelling them to lie on their backs, or

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to ſit upright, pinned in a chair; the ill-conſequences of which are ſo exceedingly evident.

IT is hoped, no apology may be thought neceſſary for theſe obvious remarks, ſince no pains ſhould be thought too great if they may prevent the evils here pointed out, nor can too much be ſaid to inculcate good nurſing, (and eſpecially exerciſe) which is alone adequate thereto.*

A VERY few words may ſuffice on the head of REST, the irregularities therein being far leſs numerous and important than in the former. It will be ſufficient to notice them in regard to the improper inducement of young children to continue in action after they feel themſelves wearied, and in keeping them out of bed

* A proper attention to this, and many of the preceding articles has been conceived to be of ſo much importance, that the benevolent Governors of the *Britiſh* Lying-in Hoſpital, ſome years ago gave orders, that ſuitable Directions on theſe heads ſhould be drawn up, and given to every mother, on her leaving that Charity.

beyond

beyond a proper hour. Children in health never wiſh to ſit ſtill when they do not actually feel it to be neceſſary, much leſs to go to bed over early. But it is to be remembered, that young people require more ſleep, and to be longer in a recumbent poſture than adults; for though they uſually riſe very early, they get to reſt more than proportionally ſoon, being diſpoſed to fall aſleep almoſt the moment they are ſtill; and this is natural to them, and is a demonſtration of the advantage of exerciſe.

PROLIX as theſe articles may appear, it may, nevertheleſs, add a completeneſs acceptable to the younger part of the profeſſion, to comprehend under them ſeveral things relating to the different *Modes* of Motion and Reſt, and pointing out many improprieties that have a natural tendency to induce, or increaſe various correſponding deformities.

Theſe will relate to the manner of children's *ſtanding*, *walking*, *ſitting*, and *lying*, and particularly reſpect the poſition of the

the head and feet, and the form of the back, ſhoulders, and hips. It may not, therefore, be improper in this place, nor it is hoped, be thought going out of the true line of my profeſſion to advert a little to each of theſe. Indeed, to propoſe regulations of any kind merely with a view to a graceful manner of ſtanding or walking, would be highly incompatible with the intention of the work; but ſince this part of it is appropriated to the general management of children, it is hoped the reader may not deem it altogether impertinent that he is invited to pay attention to certain things, which for want of correction whilſt children are young, and frequently under the eye of medical people, may by the neglect of their ordinary, and leſs intelligent attendants, grow up to real evils. For it is very certain, that from an improper manner of reſting upon any of the extremities, whether in ſitting or otherwiſe, different parts may take an ill form; and what is worſe than an awkward appearance,

ance, (to which their parents are apt to confine their attention) children often grow up weak; whereby the poor become unfit for thoſe labours and exerciſes for which they are deſigned, and the neceſſities of their ſituation frequently demand.

And I here beg leave to remark, that the very means frequently made uſe of by people of rank to prevent ſome of theſe deformities, may on the contrary, occaſion them. Such are the uſe of ſteel-collars, various ſorts of ſtiff ſtays, and other tight bandages. For I am confident, nor am I ſingular in the opinion, that when recourſe is had to theſe things, before any parts have taken a wrong turn, they are very likely to occaſion it. Not that ſuch contrivances are afterwards improper; for when the bones have, by any means, been thrown out of their natural direction, Art can frequently rectify it, and point out where to apply, or to take off preſſure; and has been fully conſidered in the account of diſeaſes. But before this, and while the bones are growing,

compreſſion, however properly applied, is in effect oftentimes ill-directed, owing to the continual and irregular action of children, eſpecially when they feel any parts unpleaſantly confined.

I COME now to the circumſtances immediately hinted at, and firſt thoſe which regard the head or neck.

MANY infants come into the world either with the neck drawn a little to one ſide, or an awkward turn of the head appears to take place afterwards. In the latter inſtance, it may be the effect of habit, and amongſt other cauſes may be owing to children being placed in the cradle, or carried improperly, ſo that the light, and other objects that forcibly attract their notice, are too frequently on the ſame ſide. The remedy in either caſe, as far as it may become ſuch, is obvious, differing nothing from the intentions already noticed in the chapter on ſquinting; every thing ſhould be ſo contrived as may tend to draw the head to the other ſide, and eſpecially ſuch things

as

as may have a ſudden and forcible operation on the muſcles, by producing ſtrong voluntary motions. It may not, perhaps, occur to every one, how much may be effected by ſuch means. Several ſtriking inſtances of it, however, have been met with; * and we daily obſerve ſimilar effects of a certain poſition in flowers and ſhrubs, which without any help from the hand, turn about, obedient to the air and ſun operating upon their internal ſtructure.

* An Embaſſador from *Morocco* being at *Paris* went to ſee the *Charity-Hoſpital*, where paſſing the ward for the wounded, ſix of them who had not ſtirred for ſeveral months before, roſe up and came to the Embaſſador, to the great ſurpriſe of the whole hoſpital; † curioſity or ſurpriſe effecting that, which the moſt powerful medicines could not, in ſo ſhort a time.—The like circumſtance, is reported to have taken place very lately from a fire happening in the houſe where an elderly lady had long lain bed-ridden; who perceiving the fire, ſuddenly roſe up from her bed, without any aſſiſtance, and ran into the ſtreet.

† Hiſtoire de l'Ambaſſadeur de *Maroc*, Envoye au Roi de *France*, en 1682.

THE next obſervations reſpect the back and ſhoulders—Some young children, naturally well-formed, acquire after a while what is termed round-ſhoulders; the vertebræ of the neck and back, projecting too much, and forming an unſightly curve.

The morbid affection of this part has been mentioned already; I have only to notice here a change ariſing merely from ſome bad habit or cuſtom, through an improper manner of *ſitting* or *ſtanding*. In regard to the former, it may be obſerved, that the ſoft concave-bottomed chairs, in which young children uſually ſit, are on many accounts improper for their years, who ſhould always make uſe of a flat and hard ſeat, and generally without arms, as directed for the prolapſus ani; which complaint it would have a tendency to prevent. But in the hollow-bottomed chairs children find themſelves obliged to recline in one way or other, or to be making certain exertions for keeping themſelves upright, and preſerving an equilibrium of the

the body; and it is obvious, that either a bending poſture, or the efforts neceſſary to avoid it, if often repeated, may become hurtful to weakly children.

AN improper manner of *ſtanding*, though leſs frequently a ſource of this kind of miſchief, on account of the poſition being more frequently varied than in ſitting, is, nevertheleſs, capable of giving an awkward turn to the back and ſhoulders, as well as to the feet. We are creatures of habit, both in reſpect to our bodies and minds, ſo that to whatever we may have for a little while accuſtomed ourſelves, we have an increaſing propenſity; and when the habit is once formed it is with difficulty broken. Children ſhould therefore be early accuſtomed to ſtand very upright, inſtead of being ſuffered to lean upon whatever may happen to be near them, as they are frequently diſpoſed to do.

Should one of the ſhoulder-blades *project* more than the other, the child ſhould lie as much as may be on the contrary ſide; as the ſhoulder upon which one lies

always projects beyond the plane of the back. When the ſhoulders themſelves happen to be too high, a child ſo diſpoſed ſhould never be ſuffered to ſit in an elbow-chair; nor ſhould any child ſit before a table, that is either much too high or too low for the ſeat in which he may be placed, eſpecially if it be for the purpoſe of reading, writing, or any other employment that may engage him for any length of time. But if one of the ſhoulders be *higher* than the other, the child ſhould frequently be directed to ſtand only upon the foot of that ſide, at leaſt to bear his weight chiefly upon it; by which means, the ſhoulder that is too high muſt neceſſarily fall lower, and the other be raiſed: or a ſmall weight may be put upon the ſhoulder that is too low, which will incline the child to raiſe it up. Or he may be cauſed frequently to carry a light chair, or ſuch like play-thing, in the hand of that ſide, which will have the ſame effect. The like means ſhould be uſed when one hip is higher than the

other.

other, which is both a very common and peculiarly unfortunate complaint.

Another eaſy and efficacious mean of rectifying the ſhoulders, is to make the child ſupport himſelf with a very ſhort cane on the ſide where the ſhoulder is too high, which will oblige him to lower it; and at other times, to put one that is too long for him into the other hand, which will raiſe the ſhoulder on that ſide. He may likewiſe often ſit in a chair with two arms, one of them being made a little higher than the other.

Theſe and other ſimilar means may be very eaſily complied with, and ſeveral of them ſo managed as to be made a ſort of play or amuſement to the child; and if properly perſevered in, will correct many deformities that have originated merely from bad habits, as well as conſpire with other contrivances to remedy ſuch as may depend upon a ſlight mal-formation.

THE *Feet* of children, it has been ſaid, are likewiſe liable to receive an improper

turn; and this may arife from habit, as well as from original mal-formation, which has already been noticed. Children when converfing with thofe with whom they are familiar, feldom ftand firmly on their feet, but are apt to lean upon one fide of them, fo as to bear almoft upon the ankle, inftead of the foles of the feet. By degrees, this habit is not only increafed, but the tendons themfelves are difpofed to contract, or thofe on the oppofite fide become weakened. In the like manner, by ftanding upon the toes, the tendon of the heel, in time, becomes fhorter, as is manifeft in every woman who wears very high-heeled fhoes. To obviate the former, little more is required, than to correct the child's manner of ftanding, by teaching him to bear firmly on the bottom of his feet: or if a foot be turned very much to either fide, the fole of the fhoe may be thickened upon the fide on which the child bears. If by treading upon the toes, the heel is become contracted, the heel-

piece

piece ſhould be taken off from that ſhoe, inſtead of its being raiſed; as hath ſometimes been very improperly done. Beſide this, ſuch children ſhould be frequently cauſed to walk up ſteep aſcents, by which they will be obliged to bear up the fore-part of the foot, whereby the tendon of the leg will be ſtretched, and the heel muſt fall lower.

Moſt of the remedies propoſed for theſe little diſorders, will have another advantage, as they neceſſarily inculcate exerciſe; in favour of which ſo much has been ſaid: the great neglect of it, eſpecially among the poor, is daily lamented by every man of obſervation and feeling, and the more ſo, as it is a Good they cannot always command.

If I had not already far exceeded the bounds I had intended, I ſhould be induced to ſay ſomething on the Manner in which Exerciſe becomes ſo beneficial to children—Let it ſuffice, however, to extract a few of the pertinent and elegant remarks

of

of DESESSARTZ* on this head, whilſt I more briefly obſerve, that Exerciſe tends to

* " LA liaiſon et la dépendance que l'auteur ſuprême de la nature a établies entre toutes les parties de ce compoſé merveilleux, ſont ſi intimes, que le Prince de la Médicine nous a répreſenté le corps animé, et jouiſſant de ſes fonctions, comme un cercle dans lequel on ne peut reconnoître ni commencement, ni fin.—En effet, les inſtrumens deſtinés à la chylification tirent toute leur force des organes de la ſanguification, ceux-ci des nerfs et du fluide qui'ls contiennent : et ce fluide (ſi nous en croyons le ſyſtême le plus univerſellement adopté, et auquel il manque peu de choſe pour être démontré : ce fluide) tire ſon origine du ſang, et le ſang des alimens que nous prenons tous les jours.—De la conſtance et de la régularité de fonctions auſſi différentes et auſſi multipliées dépendent notre ſanté et notre vie. Il ne ſuffit pas de prendre des nourritures, il faut qu'elles ſoient bien digérées, changées en ſang, et ce ſang doit être aſſez travaillé pour fournir non ſeulement la lymphe nourriciere de tout le corps, mais encore un fluide très-ſubtil qu'on appelle fluide animal. Chaque liqueur doit être ſeparée dans ſes glandes, et celles que la nature rejette comme inutiles et dangereuſes, doivent être pouſſées au dehors.

Or, rien n'eſt plus propre à faciliter et a perfectionner toutes ces opérations, que l'Exerciſe. Si nous jettons les yeux ſur notre corps, nous y appercevrons une multitude

to puſh forward the blood through the ſmall veſſels, and to unfold them in the manner nature has deſigned them to be extended, in order to promote the growth of the infant, whilſt it preſerves the blood in a proper ſtate of fluidity, and promotes both the Secretions and Excretions; which are the next things it was propoſed to conſider.

multitude de vaiſſeaux qui ſont entrelaſſés les uns dans les autres, ſerpentans entre les fibres muſculaires, à la preſſion ſucceſſive deſquelles ils doivent une grande partie de leur mouvement et de leur action ſur les fluides. A meſure que les muſcles entrent en jeu, ils produiſent des ſecouſſes reiterées ſur les vaiſſeaux ſanguins, qui ſe communiquent dans tout le ſyſtême artériel et veineux. Ces ſecouſſes non ſeulement procurent aux fibres la force, et la ſoupleſſe, qui caracteriſſent leur bonne conſtitution, mais elles broyent, atténuent et ſubtiliſent les liquides contenus dans les vaiſſeaux, achevent la tranſmutation du chyle en ſang, en lymphe, et en fluide animal; la circulation eſt plus libre, les ſécrétions ſe font mieux, et plus uniformément et la digeſtion en devient plus parfaite."—*Traité de l'éducation corporelle des Enfans en bas Age.*

RETENTION

## RETENTION *and* EXCRETION.

EVERY medical reader will be ſenſible, how greatly health depends upon a due proportion between the daily ſupplies, and the various diſcharges of the body: the latter will vary according to the diet, age, and particular mode of life of each individual. The excretions of infants, however, inſenſible perſpiration excepted, are chiefly from the bowels and bladder; but the latter is not very liable to diſorders. After what has been already advanced under the head of *Diſeaſes*, it will be ſufficient, therefore, to ſay, that the retention of urine during early infancy is chiefly from the birth, and is uſually removed by applying a bladder of hot water to the belly, and gentle rubbing with a little warm brandy, with oil of juniper and oil of almonds, or an onion; and throwing up a clyſter: or ſhould theſe fail,

fail, the infant may be put up to the breaſt in a pan of warm water, and take a ſpoonful of marſh-mallow, or parſley, or wild-carrot-tea, ſweetened with honey, with the addition of two or three drops of the ſpirit. æther nitroſi. This, if there be no mal-formation of parts, will generally produce the deſired effect in the courſe of a few hours; though caſes have occured in which infants have voided no urine for the ſpace of four days, and have ſuffered very little inconvenience: I have even known one inſtance of the ſuppreſſion continuing for five days; and it is remarkable, that two former infants in this family voided no urine for three days. Should the ſuppreſſion, however, continue during two complete days, the following cataplaſm may be applied warm to the region of the pubis.

TAKE of parſley and mallow-roots, leaves of creſſes, and juniper-berries, of each a handful, and of the roots of garlic one ounce; boil them ſlowly in water, or in wine, to the proper conſiſtence for a poultice.

tice. On the other hand, the ſudden application of cold to the regio pubis has ſometimes produced an immediate good effect. Where all theſe means have failed, and the infant been in much pain, I have directed a clyſter with a few drops of laudanum, which has preſently removed both the pain and ſuppreſſion.

As in adults a ſuppreſſion of a very diſtreſſing kind ſometimes occurs merely from a ſpaſmodic ſtricture of the urethra; and not only reſiſts for a length of time the ordinary means of cure, but is found to recur again after a temporary removal; it may not be amiſs juſt to notice it here, as the complaint may, poſſibly, be met with in robuſt youths, although I have never yet ſeen it. The remedy for it is alſo very ſimple, and I believe newly diſcovered, and firſt announced by Mr. CLINE,* conſiſting only in the tinctura ferri muriati, which he adviſes in the doſe of gtt. x, to adult perſons, every ten

* *Medical Records and Reſearches.*

minutes,

minutes, till ſome relaxation ſhall take place; which generally does in the courſe of an hour.

SOME of the old writers have ſpoken alſo of incontinence of urine, ariſing from weakneſs of the ſphincter of the bladder; but I have never met with it in early infancy. They preſcribe agrimony and myrrhe, and direct aſtringent fomentations of red wine to the belly, perinæum, and loins.

THE preſent obſervations are therefore chiefly confined to the Bowels, which would call for a ſcrupulous attention in this place, if ſo many things relative to them had not been diſcuſſed in a former part of this work. It were needleſs, therefore, to ſay more, than that (generally ſpeaking) infants are rarely healthy long together, who have not two or three ſtools every day; or ſhould they be more, for the firſt three months, if the child be brought up at the breaſt, and the nurſe have a ſufficiency of milk, it will generally thrive the better. The

ſtools

ſtools likewiſe ought to be looſe, of a yellow colour, free from lumps, or curdy matter, neither of a very acid, nor fetid ſmell; and ſhould come away without griping. When children are about a year old, or perhaps earlier, pains ſhould be taken to procure one ſtool at leaſt every day, as well periodically, as conſtantly; and for this, the morning is moſt adapted, and after breakfaſt, by which the ſtomach and bowels will be ſtimulated. To this end they ſhould be ſet on the chair, and not ſuffered to play until they have had an opening, for which they ſhould ſtrain, till at length it becomes cuſtomary, which may be eaſily effected; and by which we ſhall gain a point, with reſpect to the health of children. On the other hand, if an infant is brought up by hand, the danger generally lies in the other extreme, ſuch children being diſpoſed to be purged, and to have griping and ſour ſtools, from the aceſcent, and often indigeſtible nature of their food, eſpecially if fed by the ſpoon; and therefore require an early attention

tention when their bowels are diſpoſed to be open, and their food to be changed, in the manner directed under the article of Purging.

## *The* PASSIONS *of the* MIND.

THIS is the laſt Article mentioned as included in the *Non-naturals*, and on which I ſhall be very brief, it being the happineſs of Infants to be very little affected by them. This article can, therefore, relate to them merely in regard to their mode of expreſſing ſuch paſſions, and principally reſpects Laughter and Crying. The former, if long kept up, or very violent, may not only induce the hiccough, but it is ſaid, may even throw an infant into fits. The latter is, indeed, much oftener ſuſpected of being miſchievous; and chiefly by occaſioning fits, or a rupture: the exceſs of both theſe affections ſhould, therefore, be guarded againſt. Moderate, and not too frequent Crying, how-

ever, ought not to be alarming; and, indeed, a variety of conſiderations induce me to believe, that this expreſſion of the paſſions in Infants is not only much more harmleſs in itſelf than is generally imagined, but is alſo, in ſome reſpects, ſalutary. The firſt Cries it makes we know to be ſo, and that children recover from the paroxyſms of ſome complaints (as was mentioned in regard to the Croup) by an effort of this kind. It is evident likewiſe, how very much health depends on a free circulation of the blood through the lungs, and on their free expanſion from the dilatation of the bronchial veſſels. But as new-born infants are incapable of giving themſelves any exerciſe, and, indeed, of receiving that kind which tends to promote ſuch an effect, I have conceived Crying to be an effort which Nature may have wiſely ſubſtituted in its ſtead.* Whatever is truly natural I al-

* Fletus moderatus pueris non obeſt—pectus dilatat et calefacit. PRIMEROS. See alſo *Ariſtot. Politic. Lib.* vii. C. 17, where the idea is ſupported more at large.

ways

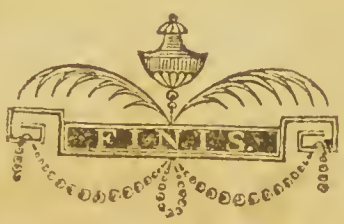
ways conceive to be right, though every thing, is capable of being abuſed, and the moſt beneficial dictates of nature may be exceeded. I am ſatisfied, however, that the pacifying of children by improper means, and eſpecially cramming them with food when they are not hungry, (againſt which ſo much has been ſaid) occaſions far greater evils in thouſands of inſtances, than ever were produced by the irritation from Crying. The cries of infants, however, are very commonly plaintive; and as they ſeem to argue diſtreſs, cannot but create it in every perſon of ſenſibility around them. The Nurſe, therefore, who can with calmneſs, hear an Infant cry, without attempting to pacify it, by every proper mean, is a Monſter in human ſhape, unfit to be truſted with the care of any animal being, much leſs with a tender, helpleſs creature, whoſe only language, by which it can expreſs its wants or its ſufferings is its TEARS.

I cannot take my leave of the reader without offering one apology more for

having dwelt ſo long on this, and ſome other heads leſs important than the reſt; my motive has been the deſire of inſtructing, though in ſome inſtances at the riſk of tiring, or otherwiſe diſpleaſing; but practitioners who feel as parents, will endeavour, by every means, to leſſen a mother's fears as far as they may appear to be needleſs, wherever no other Remedy can be offered.

I SHALL conclude by obſerving, that, though the Paſſions of the Mind refer ſo little to Infants, they relate very materially to the Wet-nurſe; who beſides endeavouring to keep her ſpirits as calm as poſſible, ought to be exceedingly careful not to put a child to her breaſt, when under the influence of any violent paſſion, of whatever kind it may be, the bad effects of which have already been inſtanced under the head of diſeaſes. And I ſhall think myſelf well recompenſed for the trouble I have had, if this, or other hints, may prove the means of leſſening the dangers of the infant-ſtate, and the con-

conſequent ſad fatality that attends it; as well as of abating the anxiety of the fond Mother, who after having brought her tender Charge into the world with Sorrow, is pierced with double Pangs at its leaving it.—An Event which, as Experience warrants me to ſay, may by Art and good Management, be often prevented, the author ardently hopes, that both Parents and Practitioners may have fewer occaſions to lament.



# AN ALPHABETICAL LIST OF Medicines recommended in this Work, TO WHICH The COLLEGE of PHYSICIANS have given *new* Names.

| NEW NAMES. | *Names formerly in Use.* |
|---|---|
| **A.** | |
| ACIDUM muriaticum. | Spiritus Salis marini. |
| Aqua Ammoniæ. | Spiritus Salis ammoniaci. |
| Aqua Ammoniæ acetatæ. | Spiritus Mindereri. |
| Antimonium tartarisatum. | Tartarum emeticum. |
| Aqua Cupri ammoniati. | Aqua Sapphirina. |
| Aqua Kali puri. | Lixivium saponarium. |
| Aqua Kali præparati | Lixivium Tartari. |
| Aqua lithargyri acetati. | Extractum Saturni. |
| Aqua lithargyri acetati composita. | Aqua vegetabilis mineralis. |
| Argentum nitratum. | Causticum lunare. |
| **C.** | |
| Calx Antimonii. | Antimonium calcinatum. |
| Catechu. | Terra Japonica. |
| Confectio aromatica. | Confectio cardiaca. |

Empla-